

HOMES:
A household
model
for economic
and social
studies

Andrew Mason

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for household projections
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PREFACE

The research effort that led to the development of this model and computer package was motivated by a desire to improve the scope and quality of demographic information available in Asia and the Pacific. Many countries of the region are experiencing dramatic reductions in fertility and mortality that are causing fundamental changes in the characteristics of their populations. These transformations are fairly well understood, and more and more countries are factoring basic demographic change into their planning efforts and their formulations of economic and social policy.

The most immediate and perhaps most important impact of demographic change is on the character of the family and the household. Fertility decline means fewer children to rear and, typically, a shorter childrearing span. Over time it also means fewer adults to share the support of aging parents. Mortality decline has increased the likelihood that family members of any age will be alive and has reduced the chances that important family links will be severed by death. For the most part, however, the effects of demographic change on the household have not been comprehensively addressed in economic and social policy. Statistical and planning agencies in most countries do not project even the number of households, much less their demographic composition.

Why is it important to have this information? An increasing body of research points to the importance of the household as a determinant of social and economic behavior. Women who have young children behave differently from women who do not. Children raised in homes with both parents present differ from those raised by a single parent. What the household buys and what the household owns vary with the number of members, their age, and their sex. The living standard of most people depends as much on the earnings of other members of the household as it does on their own. It is hoped that improving the availability of information about the household and how it is likely to change will assist efforts to frame more effective policy and to improve social and economic planning.

The development of the HOMES model for household projections has benefited from the collaboration, support, and interest of a number of institutions and individuals to whom I am most grateful. Thus far, the model has been applied in six Asian countries, and detailed reports on those efforts will be available over the next few years. Research on Thailand is being conducted with Mathana Phananiramai and Nipon Poapongsakorn of Thamassat University and with the cooperation of the National Economic and Social Development Board and the National Statistical Office. Analysis of data from the Philippines and Taiwan has been a joint effort by Linda G. Martin of the East-West Population Institute and, for Taiwan, Chung-Chen Lin, Institute of the Three Principles of the People, Academia Sinica, Taipei, and, for the Philippines, Cristela Goce of the University of the Philip-

piners with the cooperation of the National Census and Statistics Office. Analysis of Indonesian data has been assisted by Sisdjiatmo Kusumosuwidlo of Lembaga Demografi. In Malaysia application of the method was carried out as part of a project undertaken by the Economic Planning Unit, with the support of the United Nations Fund for Population Activities, to assess the long-run implications of population growth. I appreciate the support and suggestions of Abu Bakar Abdul Karim, David Demery, Kwok Kwan Kit, and Richard Leete. The analysis of data from the Republic of Korea is a collaborative effort with Sung-Yeal Koo, Yonsei University, and the General Motors Research Laboratory.

Colleagues and coworkers at the East-West Population Institute have contributed to this effort. Besides participating in the analysis of data from the Philippines and Taiwan, Linda G. Martin has been my coauthor of papers that developed many of the principles applied here. Her advice has been most helpful. Burnham O. Campbell has offered many useful suggestions. John Bauer and Robert Kleinbaum have provided helpful insights in their research assessing the implications of HOMES for changes in labor force participation and consumer expenditures. Lee-Jay Cho, director of the institute, has lent his active support to this project, contributing to it in many ways. Very capable research assistance has been provided by Teh Yoke Yun, Yulin Chang, and Laura Shrestha. Norma Uejo and Loretta Koga have provided efficient secretarial help. Allison Greenspan and Sandra Ward gave the manuscript careful editorial attention. Writing the computer programs for HOMES has been a major undertaking, and I am very grateful to Wayne Shima for his efforts.

The Office of Population, U.S. Agency for International Development, provided partial support under AID Cooperative Agreement No DPE-3000-A-00-3069-00 and AID Contract No DSPE-C-002 for the research on HOMES and publication of this paper.

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ABSTRACT This paper is a reference guide for the use of HOMES, a demographic model and computer package developed to project the number and demographic characteristics of households. To familiarize the reader with the range of information available from HOMES, a summary of its application to the Republic of Korea is provided. A detailed discussion of the principles that underlie the computer model is reported and illustrated using census and survey data from Thailand, Indonesia, the Philippines, Taiwan, and Malaysia, in addition to the Republic of Korea. Detailed specifications of HOMES, sample output, and procedures for running HOMES on a mainframe computer are also provided.

1. AN OVERVIEW OF HOMES

This paper is a reference guide for the use of HOMES, a computer package developed to project the number and demographic characteristics of households. By applying the package to standard population projections, the user is provided data on:

- number of households
- age and sex of the household head
- households with single heads
- one-person households
- average household size
- sex and age distribution of household members
- number of children and grandchildren
- number of parents

The number of households and the age and sex of household heads are standard information provided by most household projection models. Other models, however, do not treat the living arrangements of other members of the population in a comprehensive fashion. HOMES employs a unique methodology to determine the entire household membership—including the head, the spouse, children, grandchildren, parents, and other household members—in a fashion consistent with underlying mortality and fertility trends. If, for example, childbearing becomes more concentrated among women in their 20s, HOMES provides an accounting for this trend in its projection of the number of children in households in subsequent years. Or if mortality among the elderly declines, HOMES accounts for the impact on the number of households headed by elderly, the number of elderly living alone, and the number of persons living in households headed by their offspring.

General application

HOMES has been developed to project household composition in developing countries. With its emphasis on analyzing the effects of demographic

change on both the number and the composition of households, it is particularly well suited for application to countries where extended or multi-generational families are prevalent. HOMES has been tested with and used to analyze data from various East and Southeast Asian countries, including the Republic of Korea, Taiwan, Indonesia, Thailand, Malaysia, and the Philippines.

The most reliable application of HOMES is to projecting households at the national level, but it has also been applied to ethnic groups among whom intermarriage is not common. Using HOMES to project households for other subnational groups, such as urban residents, presents no computational problems, but the results may be less reliable and therefore such analysis should be undertaken with care.

HOMES has been applied to national planning problems and to the analysis of interactions between economic and demographic change. Changes in the number and demographic characteristics of households are known to influence the demand for housing, expenditure patterns (for example, the share of the household budget devoted to food, clothing, and other items), and patterns of employment, particularly labor force participation by women. As the number of elderly persons increase, governments are becoming concerned with problems faced by the aged, including finding suitable living arrangements and dependency on adult children's support. HOMES provides basic demographic information needed to analyze these issues and to assess the importance of demographic change for a wide range of social and economic policies.

HOMES can be conceptualized as consisting of two stages. In stage 1 the rules governing household formation and composition are determined from base-year data. In stage 2 the number and composition of households are projected from the results of stage 1 combined with population projections. Stage 2 is run repeatedly to assess the implications of alternative populations projections. But stage 1 is run only when new information from a major survey or census becomes available.

The data requirements for HOMES are relatively modest. They consist of population projections that include age-specific fertility rates, and a recent census or large, representative survey that includes a household roster with the age, sex, and relationship to the household head of each household member. For a few countries, analysis of recent census data on household composition has been completed and application of HOMES requires only population projections.

This reference guide is organized as follows. To familiarize the reader with the range of information available from HOMES, the remainder of this section illustrates the application of HOMES with data from the Republic of Korea. Section 2 provides a more detailed discussion of the model and its application to six Asian countries. Section 3 provides specifications for

the HOMES computer programs. Section 4 describes steps for running HOMES, including the setup of input data and the computer programs. Section 5 provides a complete description of the computer output from HOMES.

Application of HOMES to the Republic of Korea

The information provided by HOMES is illustrated with an application to census data from the Republic of Korea. The number of households and the size of the civilian, noninstitutionalized population are projected to the year 2000 (Table 1). The projections show the average number of members per household to decline throughout the remainder of this century to 3.4 by the year 2000. There are no computational limits to how far forward in time households can be projected, so long as the required population projections are available.

The projections differentiate family households (those consisting of members who are related) from nonfamily households. Family households include intact households (those with a head and wife present) and single-headed households (those in which the head's spouse is absent). Nonfamily households include one-person households and primary-individual households (those with six or fewer unrelated members). Table 2, which shows the number and percentage of each household type by sex of the household head, does so only for 1980 and 2000; but these data and all other data reported in subsequent tables are available at five-year intervals for the entire projection span. Backward projection using historical population data is also easily accomplished.

Table 1. Actual and projected number of households, population size, and average household size: Republic of Korea, 1960-2000

Year	Number of households	Population (1,000s)	Average household size
1960	4,378	24,989	5.7
1966	5,192	29,160	5.6
1970	5,857	31,435	5.4
1975	6,761	34,769	5.1
1980	8,133	37,049	4.6
1985	9,529	39,902	4.2
1990	10,908	42,399	3.9
1995	12,302	44,743	3.6
2000	13,621	46,868	3.4

Note: Data for 1975 and earlier are census data and not adjusted for underenumeration. Population data for 1980 and later are adjusted for underenumeration and include only civilian, noninstitutionalized population.

Table 2. Household types: Republic of Korea, 1980 and 2000

Household type	1980		2000	
	Number (1,000s)	%	Number (1,000s)	%
Family households				
Intact	6,299	77.5	10,703	78.6
Single-head				
Male	379	4.6	583	4.3
Female	910	11.2	1,535	11.3
All family households	7,589	93.3	12,821	94.1
Non-family households				
Primary-individual				
Male	56	0.7	62	0.5
Female	63	0.8	72	0.5
One-person				
Male	149	1.8	213	1.6
Female	276	3.4	454	3.3
All nonfamily households	544	6.7	800	5.9
All household types	8,133	100.0	13,621	100.0

Note: Columns may not sum to totals because of rounding.

Table 3. Age of household heads, by sex: Republic of Korea, 1980 and 2000

Age of head	1980		2000	
	Number (1,000s)	%	Number (1,000s)	%
Male heads				
15-34	2,162	31.4	3,001	25.9
35-49	2,894	42.1	5,158	44.6
50-64	1,433	20.8	2,636	22.8
65 +	393	5.7	766	6.7
Total	6,882	100.0	11,561	100.0
Female heads				
15-34	339	27.1	408	19.8
35-49	384	30.7	670	32.5
50-64	386	30.9	687	33.4
65 +	141	11.3	295	14.3
Total	1,250	100.0	2,060	100.0

Household projections tabulated by the age and sex of the household head are also available. Table 3 reports this information with four broad age categories aggregated from five-year age group data generated as primary output by HOMES.

HOMES calculates the number of members residing in each type of household. These data, when combined with the number of households of each type, can be used to calculate the average number of members per household (Table 4).

Table 5 shows how average household size varies with the age of the head and how it is projected to change in the future.

Information on the age and sex of household members is available. Table 6 shows the average number of members in three broad age categories

Table 4. Average household size, by household type: Republic of Korea, 1980-2000

Household type	1980	1985	1990	1995	2000
Family households					
Intact	5.0	4.6	4.3	4.0	3.8
Single-head					
Male	3.6	3.1	2.8	2.5	2.5
Female	3.8	3.3	3.0	2.7	2.5
Non-family households					
Primary-individual					
Male	2.2	3.1	4.3	3.5	3.8
Female	1.9	2.4	2.4	2.2	1.7
One-person					
Male	1.0	1.0	1.0	1.0	1.0
Female	1.0	1.0	1.0	1.0	1.0
All household types	4.6	4.2	3.9	3.6	3.4

Table 5. Average household size, by age of head: Republic of Korea, 1980-2000

Age of head	1980	1985	1990	1995	2000
15-34	5.49	5.20	5.08	4.96	4.88
35-49	4.90	4.46	4.12	4.09	4.05
50-64	3.36	3.02	2.72	2.58	2.73
65+	2.17	1.69	1.35	1.39	1.80

Table 6. Average number of household members in family households, by age of members: Republic of Korea, 1980 and 2000

Year and household type	Com-bined	Age of members						Depen-dency ratio
		0-14		15-64		65+		
		Male	Fe-male	Male	Fe-male	Male	Fe-male	
1980								
Intact	5.0	0.95	0.89	1.53	1.44	0.04	0.14	0.68
Single-head								
Male	3.8	0.43	0.38	1.70	1.07	0.07	0.13	0.36
Female	3.8	0.60	0.55	0.85	1.59	0.01	0.21	0.56
2000								
Intact	3.8	0.49	0.45	1.54	1.28	0.09	0.13	0.44
Single-head								
Male	2.5	0.15	0.14	1.39	0.54	0.16	0.12	0.30
Female	2.5	0.26	0.23	0.56	1.28	0.01	0.17	0.36

Note: Dependency ratio is the population under age 15 and over age 65 divided by the population of ages 15-64.

Table 7. Number and age of household members (1,000s), by age and sex of head: Republic of Korea, 1980

Household type and age group	Com-bined	Age of members					
		0-14		15-64		65+	
		Male	Female	Male	Female	Male	Female
Male heads							
15-34	12,875	2,846	2,673	3,732	3,410	51	163
35-49	14,566	2,781	2,566	4,544	4,245	96	333
50-64	4,882	125	394	1,893	1,859	227	84
65+	803	99	89	175	140	163	137
All male heads	33,126	6,151	5,723	10,344	9,654	537	717
Female heads							
15-34	852	133	126	62	525	1	5
35-49	1,492	270	251	293	649	3	26
50-64	1,224	101	97	347	561	2	15
65+	354	42	34	68	64	—	146
All female heads	3,923	546	508	770	1,900	6	193

Note: Columns may not sum to totals because of rounding.

for family households in 1980 and 2000. The same information is also available for nonfamily households.

Table 7 reports the number and age of members in broad age categories, by the age and sex of the household heads. The average number of members can also be calculated.

HOMES also projects the relationship of household members to the household head. Table 8 reports the average number of males and females in each relationship category—head, spouse, child, grandchild, parent, and other.

Table 9 reports the percentage of males and females falling into each relationship category for 1980 and projected to 2000.

Table 8. Average number of household members in each relationship category, by age of head: Republic of Korea, 1980

Relationship category	Combined	Age of head			
		15-34	35-49	50-64	65+
Head					
Male	0.85	0.90	0.87	0.73	0.56
Female	0.15	0.10	0.13	0.27	0.44
Spouse	0.77	0.79	0.84	0.67	0.41
Child					
Male	1.17	0.85	1.66	1.08	0.37
Female	1.06	0.80	1.50	0.92	0.37
Grandchild					
Male	0.07	0.00	0.02	0.23	0.57
Female	0.06	0.00	0.01	0.21	0.48
Parent					
Male	0.02	0.02	0.03	0.01	0.00
Female	0.13	0.15	0.15	0.07	0.01
Others					
Male	0.15	0.23	0.10	0.07	0.05
Female	0.12	0.19	0.07	0.06	0.06
Combined					
Male	2.26	2.01	2.68	2.12	1.56
Female	2.30	2.03	2.71	2.20	1.76

Table 9. Actual and projected percent distribution of household members, by relationship category: Republic of Korea, 1980 and 2000

Relationship category	1980			2000		
	Male	Female	Combined	Male	Female	Combined
Head	18.6	3.4	22.0	24.7	4.4	29.1
Spouse	—	17.0	17.0	—	22.8	22.8
Child	25.7	23.3	49.0	19.4	16.9	36.2
Grandchild	1.5	1.3	2.9	1.1	0.9	2.0
Parents	0.5	2.8	3.3	0.8	4.3	5.1
Other	3.2	2.6	5.8	3.6	1.2	4.8
Total	49.5	50.5	100.0	49.6	50.5	100.0

Note: Columns may not sum to totals because of rounding.

2 DESCRIPTION OF THE MODEL

Projecting the number and type of households

One of the primary objectives of HOMES is to project the number of households. The model uses a headship method whereby age- and sex-specific headship rates are multiplied by projected population data to obtain the number of household heads and, hence, the number of households.¹ Headship rates are calculated from census samples by dividing the number of household heads by the population of each age-sex group. Four types of households are distinguished: (1) intact households, households headed by a male with the spouse present; (2) single-headed households, households in which the head's spouse is not present; (3) one-person households; and (4) primary-individual households, households consisting of unrelated members. These four categories encompass all members of the population except the military and institutionalized populations, which are projected separately. The categorization of households is used for both methodological and substantive reasons. The average household size and composition vary considerably among the four types. For example, households in which the head and spouse are both present generally have more children living at home. Parents-in-law rarely live in households that are not intact. No relatives reside in one-person and primary-individual households. Differences in household composition, in turn, affect behavior and social and economic status. In many countries, women who are household heads are more likely to work, for example, and intact households frequently enjoy higher standards of living than households with single heads.

In the East and Southeast Asian countries for which data have been analyzed,² intact households are the dominant household type (Table 10). Between 70 and 85 percent of all households are headed by a husband and wife. Likewise, the majority of the population—80 to 90 percent—of each country analyzed live in intact households. Households with a single head make up between 10 and 20 percent of all households and of the population. Single heads are considerably more likely to be women than men except in Taiwan. Although approximately 5 percent of all households in most of the countries are one-person households, only 1 percent or less of the

1. In all the results reported here, I have followed the convention of designating the husband, if present, the head of household, a practice in conformance with census procedures in most countries. There are some cases in Thailand where women are designated the head of intact households. I have changed their relationship to spouse of head and their husband's to household head.
2. Data sources include the 1976 Intercensal Survey of Indonesia; the 1970 and 1980 Censuses of the Republic of Korea; the 1980 Census of Malaysia; the 1975 Census of the Philippines; the 1980 Consumer Expenditure Survey of Taiwan; and the 1970 and 1980 Censuses of Thailand.

Table 10. Percent distribution of households and population, by household type: Six Asian countries, 1970-1980

Country (year)	Intact	Household type					
		Single-headed		One-person		Primary-individual	
		Male	Female	Male	Female	Male	Female
Households							
Indonesia (1976)	80.7	3.1	11.3	1.0	3.6	0.1	*
Republic of Korea (1970)	83.0	6.2	10.3	0.3	0.3	n.a.	n.a.
Republic of Korea (1980)	77.5	4.6	11.2	1.8	3.4	0.7	0.8
Malaysia (1980)	70.8	6.8	13.3	5.8	3.3	n.a.	n.a.
Philippines (1975)	84.9	5.4	7.1	1.4	0.8	0.3	0.1
Taiwan (1980)	84.4	7.7	4.1	3.1	0.8	*	*
Thailand (1970)	79.5	4.4	12.5	1.6	1.5	0.3	0.1
Thailand (1980)	78.0	4.7	13.0	1.8	1.8	0.5	0.3
Population							
Indonesia (1976)	87.3	2.6	9.0	0.2	0.8	0.1	
Republic of Korea (1970)	87.6	4.9	7.4	*	0.1	n.a.	n.a.
Republic of Korea (1980)	84.8	3.7	9.3	0.4	0.7	1.0	
Malaysia (1980)	78.3	6.9	13.1	1.1	0.6	n.a.	n.a.
Philippines (1975)	89.2	4.2	5.9	0.2	0.1	0.2	
Taiwan (1980)	89.1	6.9	3.2	0.6	0.2	*	*
Thailand (1970)	84.3	3.9	11.0	0.3	0.3	0.2	
Thailand (1980)	82.6	4.3	11.8	0.3	0.4	0.5	

* Less than 0.1 percent

n.a.—not ascertained

population of each country lives in a one-person household. Primary-individual households are rare in East and Southeast Asia; only in Korea do primary-individual households make up as much as 1 percent of the total. Despite their infrequency, however, primary-individual and one-person households are becoming more prevalent, if the experience of Korea and Thailand can be taken as a guide.

Households are further distinguished by the age and sex of the head. Figure 1 shows headship rates for households headed by men and women, obtained from special census tabulations for four Asian countries. Detailed rates are reported in Appendix A for all six. The age pattern of headship is quite similar in all of the countries studied. For men the likelihood of being a household head increases from low levels among those under age 25 to a peak among the middle-aged. Thereafter, the rate of male headship declines. The only exception to this pattern is Taiwan. Headship rates for

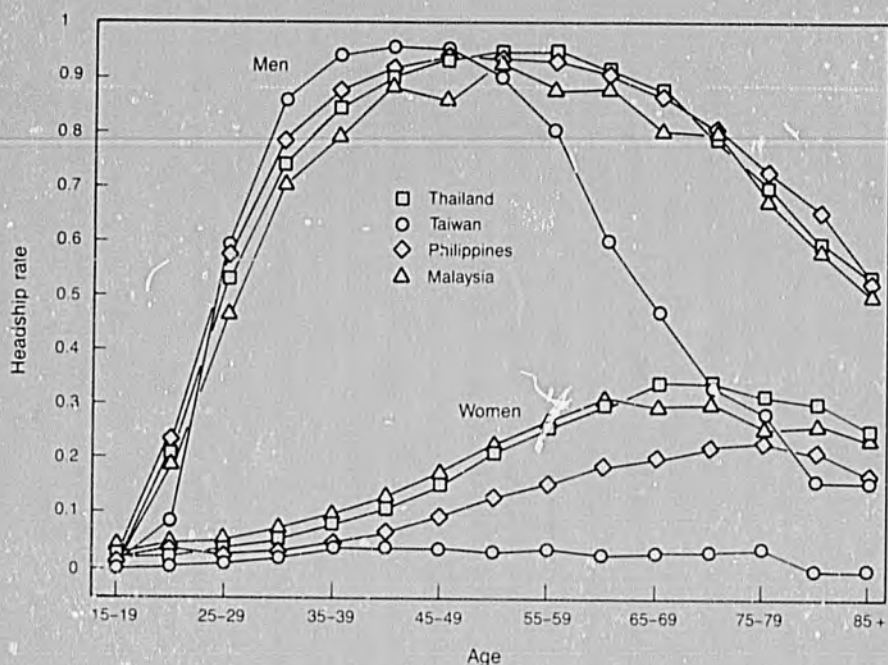


Figure 1. Headship rates for men and women, by age group: Thailand, Taiwan, the Philippines, and Malaysia, recent years

Taiwan decline much more precipitously among middle-aged men as their sons take over headship of the household. This difference is, however, largely a difference in definitions; the consumer expenditure survey on which the Taiwan data are based defines headship according to economic contribution to the household. Headship rates for women are substantially lower than for men, with a very different age pattern. Headship rates increase more slowly for young women than for young men, and the peak, if any, is much less clearly demarcated. For women in Indonesia (not shown), Malaysia, the Philippines, and Thailand headship rates increase up into the 60s and 70s. Among the countries studied the peak is earliest among Korean women, for whom headship rates peak at ages 55-59 (Appendix A).

Distinguishing among the different types of households requires more detailed rates than those shown in Figure 1. HOMES projects intact, single-headed, one-person, and primary-individual households based on headship rates (Appendix A) specific to each household type.

Intact households

Headship rates for intact households are quite similar to overall headship rates for men. Rates increase as men marry and establish households separate from their conjugal family or, remain in their conjugal family but receive the headship mantle from their father. The age of household headship varies, however, from country to country. In Indonesia, the Philippines, and Thailand, 15 to 25 percent of all men of ages 20-24 are the heads of intact households, whereas in the Republic of Korea and Taiwan fewer than 6 percent of men in this age group head intact households. Among men in their early 30s, however, from 70 to 80 percent head intact households. For men in their 40s, the rate increases to 85 to 95 percent in all of the countries studied.

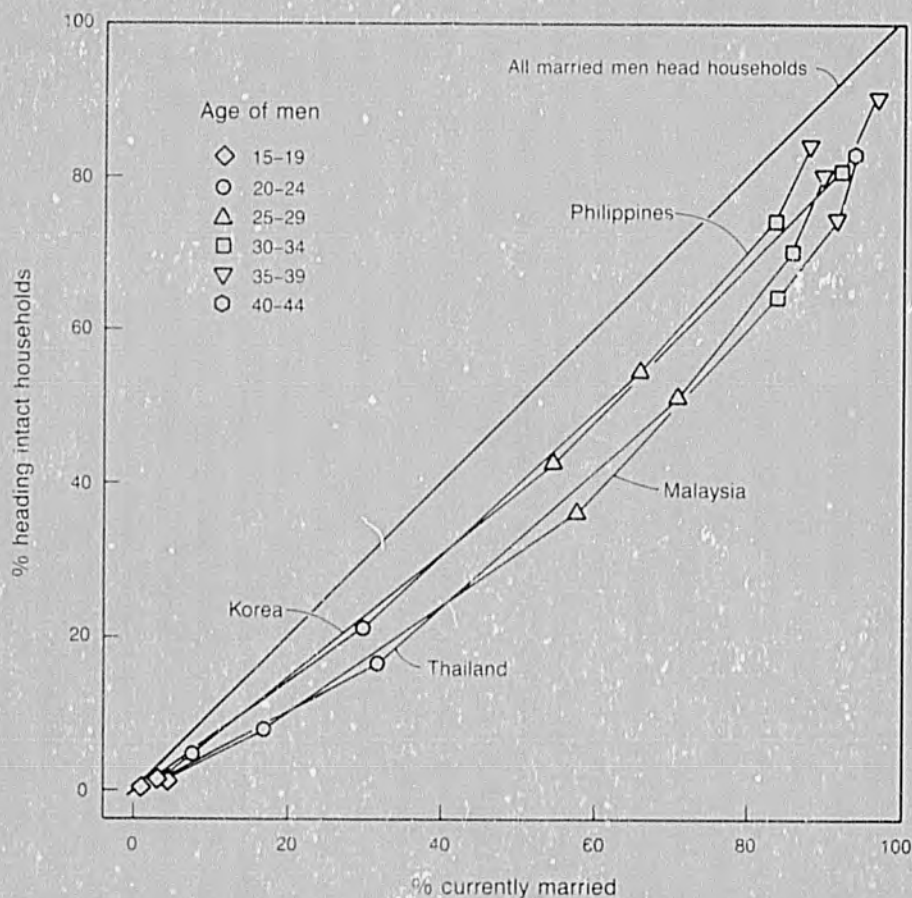


Figure 2. Relationship of marriage to intact household headship among men in Thailand, Republic of Korea, the Philippines, and Malaysia, recent years

Age at marriage is an important proximate determinant of the timing of intact headship. Using the most recently available data, the percentage of men heading intact households is plotted against the percentage married for four countries in Figure 2. Were household structure purely nuclear, the plotted lines would lie along the principal diagonal because all married men would be household heads. The vertical distance from the diagonal gives the percentage of men who are married and not the heads of households. Becoming a household head, then, is closely related to marriage, but many men do not become household heads immediately. In particular, the delays in Indonesia (not shown), Malaysia, and Thailand are somewhat greater than in the Republic of Korea, the Philippines, and Taiwan (not shown).

As men proceed through their 50s and into their later years, fewer continue to head households. The pace at which the rates decline varies, however, from country to country. Of men between ages 75 and 79, nearly 70 percent head intact households in Indonesia, in contrast to barely 20 percent in Taiwan. The decline in intact household headship is counterbalanced in part by the increase in single headship—the shift being a consequence of mortality among wives. The remaining decline in intact headship is almost entirely a consequence of a shift of the head designation to a son or son-in-law. What determines the age at which the shift occurs? Analysis of data reported in Mason and Martin (1985) shows a rough correlation between the headship transition and the completion of childrearing. The phenomenon is particularly noteworthy in Taiwan, where the decline in headship is greatest (Freedman et al. 1978, 1982).

Single-headed and nonfamily households

Headship rates for single-headed and one-person households vary substantially with the age and sex of the head (Figure 3). In general, young adults are somewhat more likely to head nonintact households than are middle-aged adults, but headship rates are particularly high among older women and, to a lesser extent, older men. The increase in single headship for men and women is primarily a consequence of mortality among spouses. The fact that women have greater longevity and are thus more likely to be widowed than are men is one of the principal reasons for the high rates of single headship among women. Of course, the data on marital status for the elderly presented in Table 11 do not indicate the extent to which men are less likely to be widowed because they have remarried. For women, the decline in single headship at older ages, where observed, is associated with the completion of childrearing, at which time adult sons assume headship of the household (Mason and Martin 1986). Nonfamily households (one-person and primary-individual households) are uncommon in Asian countries. The detailed headship rates in Appendix A show that headship rates for one-person households rarely exceed 10 percent and for primary-

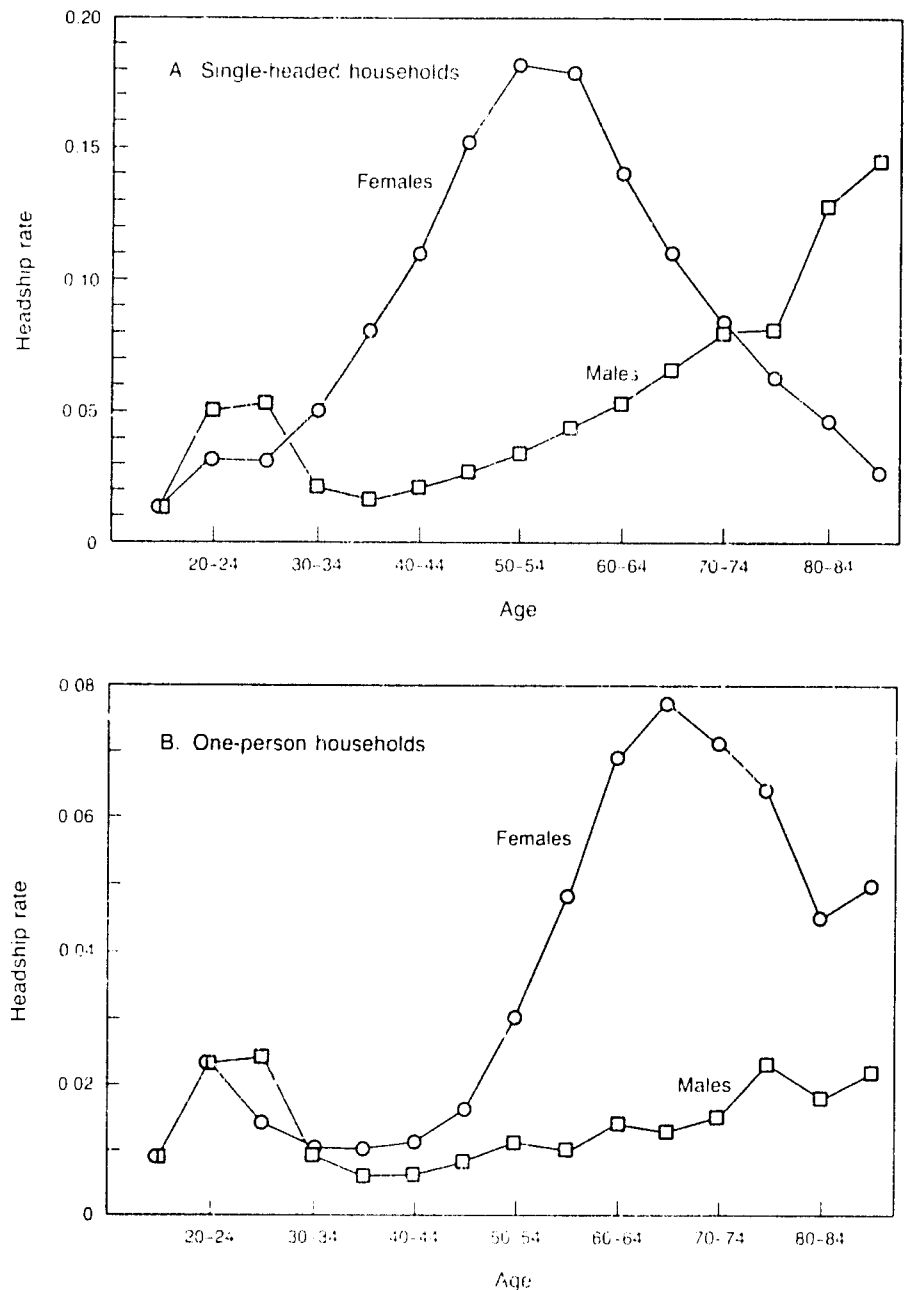


Figure 3. Headship rates for single-headed and one-person households, by age and sex of the household head: Republic of Korea, 1980

Table 11. Marital status of men and women ages 65 and older: Six Asian countries, 1980

Country (year)	Single	Married	Widowed	Divorced
Indonesia (1980)				
Male	0.013	0.813	0.154	0.020
Female	0.014	0.251	0.682	0.053
Republic of Korea (1980)				
Male	0.002	0.799	0.197	0.002
Female	0.001	0.243	0.754	0.002
Malaysia (1980)				
Male	0.038	0.761	0.172	0.030
Female	0.021	0.297	0.608	0.073
Philippines (1980)				
Male	0.034	0.762	0.193	0.007
Female	0.082	0.410	0.496	0.009
Taiwan (1980)				
Male	0.105	0.655	0.203	0.037
Female	0.010	0.403	0.575	0.012
Thailand (1980)				
Male	0.014	0.712	0.206	0.020
Female	0.019	0.335	0.584	0.024

Sources: Martin (1985); Taiwan Bureau of Statistics (1985).

individual households rarely exceed 1 percent. One-person households are, in general, considerably more prevalent among the elderly than among younger adults. Among men, rates of one-person headship are highest in Taiwan and lowest in the Republic of Korea. Among women, rates are lowest in Taiwan and highest in Indonesia, approaching 20 percent among women of ages 75-84. Primary-individual households are rare, but rates have increased marginally in recent years and households with unrelated individuals may become more important in the future.

Projecting trends in headship rates

Although many applications of the headship rate method have held rates constant at their base-year values, it is increasingly common to provide for changing headship rates, either by extrapolating the recent trend (U.S. Bureau of the Census 1979) or by tying headship rates to a measure of socioeconomic development. The United Nations (1981:12) report on household projections concludes that:

The available data indicate that headship rates have generally increased over time in all age-sex groups. . . . These increases are suspected to

be related to rapid economic growth, which has occurred in many developed countries in the 1960s. Higher levels of economic growth and development definitely favor increased nuclearization of households.

Data are not adequate to extend this generalization to developing or to Asian countries. The United Nations study reports headship rates at two time points for only four developing countries and for only two Asian countries, Japan and Singapore. This Asian data, supplemented with headship rates for the Republic of Korea and Thailand, are presented in Table 12 and support a somewhat weaker conclusion. Except for Japan, headship rates

Table 12. Changes in headship rates, by age and sex: Four Asian countries, 1960-1980

Country (year)	Age					
	15-24	25-34	35-44	45-54	55-64	65+
Singapore (1960) ^a						
Male	7.1	49.8	80.5	88.9	85.7	63.0
Female	1.1	5.3	11.5	22.6	28.3	24.7
Singapore (1970)						
Male	6.3	49.9	79.9	85.5	81.8	65.6
Female	2.0	6.4	14.0	24.8	20.1	24.2
Japan (1960) ^a						
Male	4.3	51.5	81.7	92.7	91.1	63.1
Female	1.0	3.3	10.5	17.5	14.4	10.4
Japan (1970)						
Male	11.3	61.5	82.7	91.3	91.7	68.2
Female	3.9	4.3	7.9	15.9	18.5	13.2
Republic of Korea (1970) ^b						
Male	5.9	65.2	92.6	96.5	91.2	62.7
Female	1.4	3.6	10.6	13.8	11.1	5.6
Republic of Korea (1980)						
Male	6.7	67.7	93.8	96.7	93.9	69.9
Female	4.5	5.6	10.8	19.0	22.0	15.6
Thailand (1979) ^b						
Male	11.0	65.2	88.0	94.2	91.7	76.0
Female	1.0	3.6	9.1	19.5	27.8	29.6
Thailand (1980)						
Male	11.0	63.4	87.3	94.2	93.1	78.9
Female	1.4	4.2	9.4	18.1	28.0	32.9

a. Source of data for Singapore and Japan: United Nations (1981).

b. Values are simple averages of five-year group ratios; 65+ is a simple average of ages 65-69, 70-74, and 75-79. Data for Republic of Korea and Thailand are from Appendix A.

for men have been relatively constant. Of the twenty-four age-country categories for men, about one-half show increases of more than 0.2 percent and about one-third show declines of more than 0.2 percentage points. Among women, about three-quarters of the values increase and about one-quarter decline. Thus, among these four Asian countries, the overall trend, particularly among women, appears to be toward higher headship rates, but increases are by no means uniform and at many ages rates have declined.

Any conclusion about why headship rates have changed is probably premature. In many countries, changes are correlated with socioeconomic development, but underlying demographic changes—changes in mortality, fertility, and the sex ratio—probably play an important role as well. The impact of changes in the sex ratio, in particular, has been neglected. Intact households provide a clear case in which ignoring the sex ratio is unwise. Fixed headship rates imply changing "spouseship" rates and, given declines in the relative number of available women, the required number of spouses may even exceed the number available.

Changes in headship (and marriage) should be influenced by changes in the relative number of women of marriageable age. Women in the Asian countries examined here most frequently marry men somewhat older than themselves. Fluctuations in the sex ratio are illustrated in Figure 4, which charts the number of women ages 45–49 divided by the number of men ages 50–54 in Indonesia, the Republic of Korea, and Thailand. The ratio has changed radically in these countries over the last twenty-five years and is expected to change radically in the future, as well. A number of factors account for the shifts observed. Age-sex selective mortality is important in countries with war-time experience, such as the Republic of Korea. Age-sex selective migration is important in other countries, such as Taiwan. Sudden changes in fertility, experienced in a number of Asian countries, also affect the sex ratio.

HOMES captures the impact of the changing sex ratio on intact household headship, as shown in equation (1):

$$h_t(x) = h_0(x) \sum_w d_0(x, w) [(1 + s_t(x, w)) / (1 + s_0(x, w))] \quad (1)$$

where h is the headship rate for men age x in the current or in the base year, d is the fraction of heads age x married to women age w in the base year, and s is the ratio of women age w to men age x in the current or the base year. The summation term is a weighted average of a measure of the change in the sex ratio, where the weights depend on the age distribution of marriage for intact household heads and their wives. Headship rates for nonintact households are held constant at the base-year levels.

Table 13 shows the application of the procedure to Korean men ages 40–44. Column 2 shows the age distribution of wives married to house-

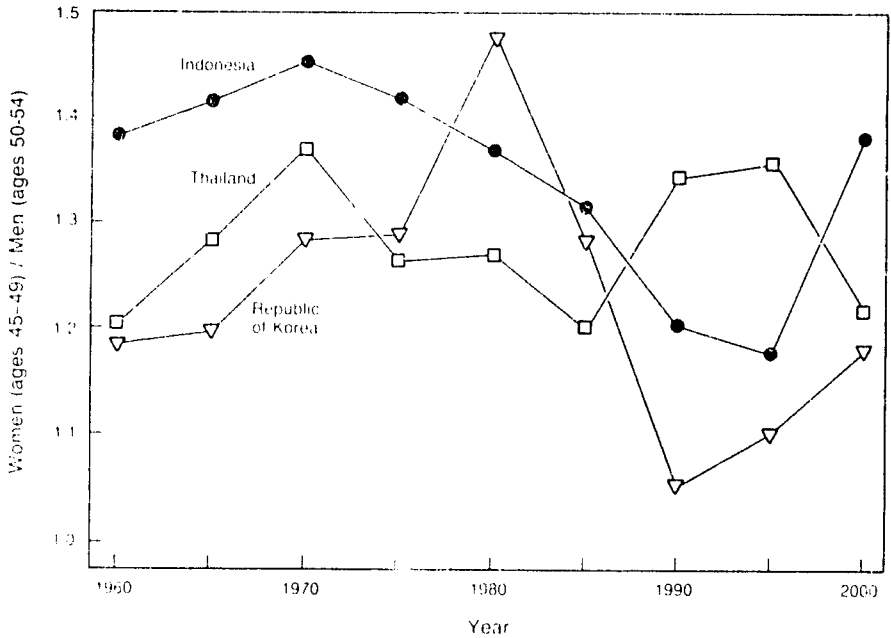


Figure 4. Actual and projected sex ratio trends: Indonesia, Thailand, and Republic of Korea, 1960-2000

hold heads ages 40-44. Because the majority are between the ages of 30 and 44 changes in the availability of women in these age groups will primarily determine changes in the headship rate. Column 7 shows a decline in the availability of women ages 30-34 (the value is less than one) but an increase in the availability of women ages 35-44 (the values exceed one). The net impact of changes in the sex ratio is quite small, effecting an increase in the headship rate of only 0.18 percent (the last value in column 8 is 1.0018). Hence, the headship rate is calculated to increase from 0.914 to 0.916 for men ages 40-44.

Projecting household membership

For each type of household, HOMES projects the number of male and female members in five-year age groups, based on the members' relationship to the head. Five relationships are distinguished: spouses, children, grandchildren, parents, and other household members. Because household structure in the East and Southeast Asian countries studied is predominantly lineal, children, grandchildren, and parents, along with heads and spouses, make up the majority of household members. As shown in Table

Table 13. Calculation of actual and projected headship rates among men of ages 40-44: Republic of Korea, 1980 and 2000

Age of spouse	Base-year data				Data for year 2000			
	Men (40-44): 1,094,990				Men (40-44): 1,967,694			
	Headship rate: 0.914				Headship rate: 0.916			
	Number of spouses		Number of women		Sex ratio (s)		$\frac{11 \cdot s(2000)}{11 \cdot s(1980)}$	$\frac{\text{Col. 2}}{\text{Col. 7}}$
	Actual (1)	Distribution (2)	1980 (3)	2000 (4)	1980 (5)	2000 (6)	(7)	(8)
15-19	51	0.0001	2,076,360	1,823,548	1.896	0.927	0.665	0.0001
20-24	1,215	0.0012	1,955,909	1,828,127	1.786	0.929	0.682	0.0008
25-29	17,375	0.0174	1,430,609	2,117,104	1.352	1.076	0.883	0.0154
30-34	166,924	0.1668	1,202,650	2,078,702	1.098	1.056	0.980	0.1635
35-39	495,362	0.4950	1,108,531	2,034,701	1.012	1.031	1.011	0.5004
40-44	300,160	0.2999	1,065,723	1,953,538	0.973	0.993	1.010	0.3029
45-49	18,933	0.0189	894,557	1,441,981	0.817	0.733	0.954	0.0180
50-54	337	0.0003	716,293	1,168,655	0.654	0.594	0.964	0.0003
55-59	258	0.0003	601,678	1,030,022	0.549	0.523	0.983	0.0003
60-64	44	0.0000	452,815	955,896	0.414	0.486	1.051	0.0000
65-69	47	0.0000	360,016	756,719	0.329	0.385	1.042	0.0000
70-74	0	0.0000	264,759	538,098	0.242	0.273	1.025	0.0000
75-79	45	0.0000	156,156	334,505	0.143	0.170	1.024	0.0000
80-84	0	0.0000	86,698	187,068	0.079	0.095	1.015	0.0000
85+	0	0.0000	41,576	89,536	0.038	0.046	1.008	0.0000
Total	1,000,751	1.0000	12,463,230	18,338,200				1.0018

Notes: Data in columns 1 and 3 were obtained from the 1980 census; data in Column 4 are from population projections. Column 2 is based on Column 1. Columns 5 and 6 are the ratios of women of each age group to men of ages 40-44.

14, fewer than 10 percent (Malaysia excepted) of the household members fall in the residual category, "other members." Children are the most prevalent household members, composing close to half of all members in all countries. Parents and grandchildren are relatively rare, together making up less than 10 percent of the household members, even though the extended family is the prevailing norm in the countries represented.

Household membership varies considerably depending on the type of household. As illustrated by Table 15, which reports data for the Philippines and Taiwan, children are less frequently found in households with single heads and particularly single male heads than in intact households. In both countries, other household members, and in law in parents of heads, are much more frequently observed in households headed by a single person.

HOMES projects household membership separately for each type of household. The following sections describe current characteristics of household composition and the procedures used to project changes in household composition.

Number of spouses

In all of the countries considered, the majority of women marry and with their husbands establish households, thus fulfilling the two conditions for being designated the spouse of a household head. The data in Table 16 report the proportion of women, by age group, who are spouses of a household head. In each country, the likelihood of being a spouse increases through the 20s and early 30s, peaking among women in their 30s or early 40s. Thereafter, women are less likely to be the spouse of a household head.

Table 14. Percent distribution of household members by relationship category: Six Asian countries, 1970-1980

Country (year)	Relationship category					
	Head	Spouse	Child	Grand-child	Parent	Other
Indonesia (1976)	20.6	17.4	52.3	3.6	1.4	4.8
Republic of Korea (1970)	18.6	15.5	51.5	3.2	3.7	7.6
Republic of Korea (1980)	21.9	16.9	48.9	2.9	3.3	5.8
Malaysia (1980)	18.8	13.3	47.5	5.3	1.8	13.4
Philippines (1975)	16.9	14.4	57.1	2.8	0.9	8.0
Taiwan (1980)	20.6	17.4	48.3	2.5	6.0	5.2
Thailand (1970)	17.5	14.0	56.1	5.1	0.8	6.6
Thailand (1980)	19.4	15.2	52.5	5.6	1.6	5.6

Table 15. Percent distribution of household members by relationship category and household type: Philippines, 1975, and Taiwan, 1980

Relationship category		Household type						
		Intact	Single-headed		One-person		Primary-individual	
			Male	Female	Male	Female	Male	Female
Philippines								
Head	16.1	21.4	20.4	100.0	100.0	28.0		
Spouse	16.1							
Child	58.4	39.3	56.4					
Grandchild	2.3	4.9	8.7					
Parent	0.8	3.1	1.0					
Other	6.3	31.3	13.6			72.0		
Total	100.0	100.0	100.0	100.0	100.0	100.0		
Taiwan								
Head	19.5	23.6	26.0	100.0	100.0			
Spouse	19.5							
Child	51.1	22.9	37.2					
Grandchild	2.3	4.6	3.1					
Parent	4.4	22.2	14.9					
Other	3.2	27.3	18.9					
Total	100.0	100.0	100.0	100.0	100.0			

There are important differences among countries in the age profile of spouses. In Thailand, for example, rates peak at a somewhat lower level than in other countries, reflecting higher rates of celibacy. A more rapid decline of rates among older women reflects, for Indonesia, higher rates of mortality among husbands and, for Taiwan, the transfer of headship to surviving sons (Mason and Martin 1985.)

HOMES not only projects the number of women in each age group who are spouses but also identifies the ages of their husbands. Table 17 shows the proportion of spouses ages 40-44 who are married to men younger, the same age, and older than themselves for each country. Typically, women in Asia marry men who are older than themselves. In the Philippines and Thailand, however, a substantial percentage of women marry younger men.

Projecting the number of spouses is intrinsically tied to the projection of intact households because each intact household implies one household head and one spouse. In the absence of changes in the sex ratio (both within and across age groups), the proportion of women in each age group

Table 16. Proportion of women over age 15 who are spouses of a household head, by age group: Six Asian countries, 1970-1980

Country (year)	Age group												
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75 +
Indonesia (1976)	.15	.53	.76	.83	.82	.76	.68	.58	.44	.29	.23	.15	.08
Republic of Korea (1970)	.02	.30	.72	.83	.82	.79	.72	.61	.49	.35	.22	.12	.05
Republic of Korea (1980)	.01	.23	.70	.84	.85	.84	.77	.64	.51	.37	.24	.12	.04
Malaysia (1980)	.04	.27	.56	.70	.75	.79	.71	.62	.50	.37	.26	.16	.06
Philippines (1975)	.08	.37	.63	.78	.83	.82	.79	.73	.67	.56	.46	.31	.15
Taiwan (1980)	.02	.32	.71	.88	.91	.91	.81	.67	.47	.33	.19	.11	.05
Thailand (1970)	.08	.34	.59	.74	.78	.79	.75	.66	.56	.45	.34	.20	.09
Thailand (1980)	.05	.32	.56	.69	.75	.78	.75	.69	.61	.48	.35	.24	.12

Table 17. Age differences between household heads and spouses

Country (year)	Age of household head			
	Younger	Same age	5 years older	10+ years older
Indonesia (1975)	.044	.156	.407	.384
Republic of Korea (1970)	.017	.274	.410	.297
Republic of Korea (1980)	.019	.350	.487	.178
Malaysia (1980)	.057	.270	.345	.328
Philippines (1975)	.112	.364	.335	.189
Taiwan (1980)	.022	.384	.383	.209
Thailand (1970)	.092	.336	.359	.193
Thailand (1980)	.095	.362	.350	.186

Note: The age difference is measured using the midpoints of the five-year age groups to which spouse and head belong.

projected to be a spouse would be held constant. Furthermore, given unchanging sex ratios the joint age-distribution of heads and spouses would be held constant. As sex ratios do change over time, however, the proportion of women who are spouses changes. Declines in the relative availability of men lead to declines in the proportion of women who are the spouses of a household head. The proportion of women who are the spouses of a household head is calculated as

$$h'_t(a) = h'_0(a) \sum_x d'_t(x, a) [(1 + s'_t(x, a)) (1 + s'_0(x, a))] \quad (2)$$

where h' is the proportion of women aged a who are spouses, d' is the proportion of spouses age a with husbands age x , and s' is the ratio of men age x to women age a where subscripts indicate either the base year (0) or the year to be calculated (t). Equation (2) along with equation (1), which determines headship rates, ensure that the number of heads age x with wives age a equals the number of wives age a with husbands age x .

Number of children

Without exception, more people fall into the category of child of a household head than into any other relationship category, reflecting the young age structures of the countries reviewed and family structures in which many individuals remain the child of a household head into their 20s and even their 30s. Table 18 reports the proportion of females who are children of a household head for each country. For girls under age 15, between 75 and 90 percent are children of a household head. (Nearly all of the remaining are grandchildren of a head.) At older ages, as women establish households separate from their parents, a smaller proportion are children of a

Table 18. Proportion of females under age 40 who are daughters of a household head, by age group: Six Asian countries, 1970-1980

Country (year)	Age group									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39		
Indonesia (1976)	.875	.916	.889	.708	.381	.165	.074	.035		
Republic of Korea (1970)	.880	.898	.865	.664	.393	.147	.090	.054		
Republic of Korea (1980)	.882	.929	.900	.695	.456	.175	.070	.043		
Malaysia (1980)	.762	.830	.837	.678	.382	.182	.100	.053		
Philippines (1975)	.879	.908	.884	.729	.465	.254	.128	.074		
Taiwan (1980)	.835	.923	.923	.857	.497	.181	.052	.019		
Thailand (1970)	.819	.872	.876	.788	.532	.300	.167	.102		
Thailand (1980)	.747	.855	.873	.786	.541	.329	.201	.122		

head. These proportions vary substantially, however, among the countries represented. At one extreme, Thai daughters are particularly likely to remain at home to an older age. Indonesian females, in contrast, are much less likely to be daughters of a household head after they reach their 20s and 30s.

Projecting the number of children of heads residing in households requires knowing the number of candidates for this type of household membership. That is, if all surviving offspring decided to live with their parents, how many of each age and sex would reside in each type of household?

This question can be answered using a technique introduced by Mason and Martin (1982). Suppose that there are 1 million boys who are 10 years old in 1980. All are candidates to be the son of a household head, but it is not known how they are distributed among the alternative households. Ignoring some minor details, all of the boys were born in 1970. Based on birth records, we know that, for example, 5 percent were born to women ages 15-19, 20 percent to women ages 20-24, and 35 percent to women ages 25-29. Therefore, in 1980, approximately 5 percent of the 10-year-old boys, or 50,000 of the 1 million surviving offspring, will be the sons of mothers who are currently ages 25-29 and candidates to be the son of a head in households with women ages 25-29. Likewise, 20 percent, or 200,000, of the boys will be the sons of women who are currently ages 30-34 and candidates for membership in households containing these women. The remaining 10-year-old sons, as well as sons and daughters of other ages, are distributed in the same way.

Figure 5 illustrates the use of offspring data from four Asian countries to show the impact of declining fertility on the number of children. Each panel shows the number of surviving offspring under age 15 divided by the total (male and female) population of the mother's cohort. In Japan,

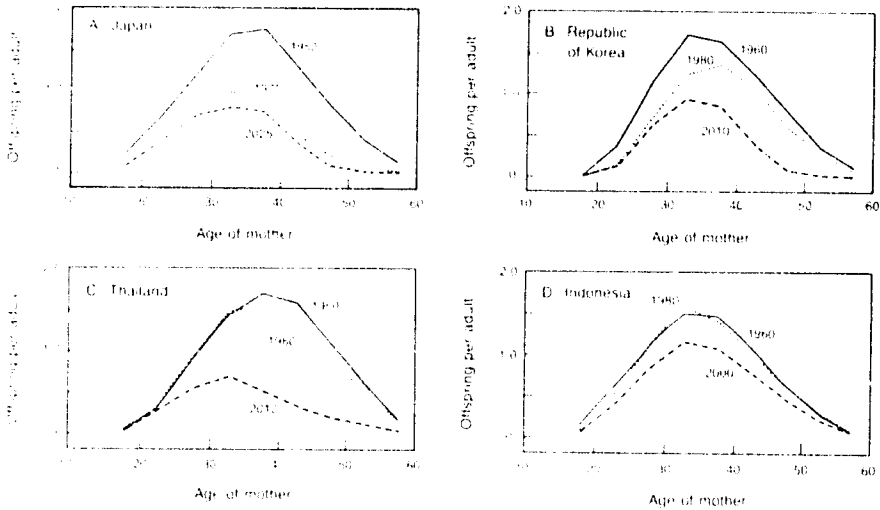


Figure 5. Actual and projected ratios of offspring under age 15 to adults, by age of mother: Japan, Republic of Korea, Thailand, and Indonesia

the number of young offspring per adult is not expected to decline much further from its already low level. But in the Republic of Korea, Thailand, and Indonesia substantial declines are anticipated. Thus, the number of children per household should decline in these countries, and because the timing of fertility is changing, children should be increasingly concentrated in households containing younger women.

The offspring data quantify only the potential number of persons who may be the children of a household head. Some of those under age 15 will be the grandchild of a head or another household member, and, a small percentage of adults will be the children of a head. The HOMES model, however, combines the data on the number of offspring with the number of individuals observed to be the child of a head in the base year to calculate rates of incidence. The model uses these values in conjunction with projected offspring data to project the number of children of the household head.

Table 19 illustrates this procedure, with data for the Malay population of Malaysia. The first four rows report the number of sons who are living in households headed by their mother or their father as estimated from the 1980 census. Of the 449,190 Malay males of ages 0–4 in 1980, 367,256 (about 82 percent) were the sons of a household head. The remaining boys were grandsons of a household head or had another relationship to a head.

Table 19. Illustration of methodology for projecting offspring of a household head (sons of ages 0-4): Malay heads, Malaysia, 1980

Item	Total	Age of mother							
		15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54
Number of sons of head observed living in household ^a									
Intact	340,397	7,453	65,834	105,175	76,138	49,308	28,440	6,499	1,550
Single female head	22,803	120	1,260	6,540	5,820	3,063	2,160	780	60
Single male head ^b	4,056	119	629	1,042	853	540	465	267	142
Total	367,256	7,692	70,723	112,757	82,811	52,911	31,065	7,546	1,752
Number of surviving sons									
Offspring weights ^c	1.000	0.019	0.204	0.309	0.229	0.145	0.075	0.017	0.002
Surviving males, 0-4 ^d	449,190	8,669	91,500	138,934	102,640	65,312	33,779	7,636	898
r ^{2e}	0.817595	0.859693	0.719497	0.757011	0.741797	0.754958	0.841941	0.851074	1.725327
Number of households ^a									
Intact	788,451	18,245	101,358	159,914	141,365	117,932	110,958	77,750	61,829
Single female head	85,740	180	3,240	11,280	12,300	12,720	12,720	17,040	16,260
Single male head ^b	46,182	7,366	11,221	5,896	4,748	5,227	4,448	3,984	3,194
Total	920,373	25,891	115,819	176,190	158,413	135,879	128,126	98,774	81,283
Distribution of sons of head by household type ^f									
Intact	0.927	0.969	0.931	0.933	0.919	0.932	0.915	0.861	0.885
Single female head	0.062	0.016	0.060	0.058	0.070	0.058	0.070	0.103	0.034
Single male head	0.011	0.015	0.009	0.009	0.010	0.010	0.015	0.035	0.081
Total	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Distribution of households by household type^a

Intact	0.857	0.705	0.875	0.903	0.892	0.868	0.866	0.787	0.761
Single female head	0.093	0.007	0.028	0.064	0.078	0.094	0.099	0.173	0.200
Single male head	0.050	0.288	0.097	0.033	0.030	0.038	0.035	0.040	0.039
Total	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

k values^b

Intact	1.082	1.375	1.064	1.034	1.030	1.074	1.057	1.094	1.163
Single female head	0.667	2.244	2.153	0.906	0.905	0.618	0.700	0.599	0.171
Single male head	0.220	0.053	0.092	0.276	0.344	0.266	0.431	0.876	2.063

a. Tabulated from 1980 Census sample.

b. Distributed by absent spouse's age using distribution for intact households.

c. Offspring weights based on age distribution of births.

d. Total from census tabulation; other values obtained by applying offspring weights.

e. Ratio of sons of head to surviving males.

f. Calculated using tabulation of number of sons.

g. Calculated using tabulation of number of households.

h. Ratio of distribution of sons to distribution of heads.

Rows five and six provide an estimate of the number of surviving male offspring. Dividing the number of sons by the number of surviving offspring yields an estimate—denoted ϕ_2 , of the likelihood that surviving offspring will be sons of a household head.

Figure 6 shows the likelihood of being a son or daughter of a household head, as calculated from 1980 Korean census data. By the time children in the Republic of Korea reach their late teens, some are beginning to live away from their parents. Thus, the likelihood of being a son or daughter of a household head declines steadily with age. Because women marry at a younger age than do men, the likelihood of being the offspring of a household head is lower for females than for males in their 20s. Even among offspring under age 15, however, the likelihood of being the child of a head is generally below 1. Although nearly all children under age 15 live with their mothers or fathers, their mothers or fathers are not necessarily the household head; many parents of children under age 5 have not yet established separate households, thus a substantial percentage of these offspring are grandchildren rather than children of a household head.

The likelihood of being a child of a household head also varies with the age of the offspring's mother. Offspring of very young mothers may be less likely to be a child of a head because their parents cannot afford to establish their own households. On the other hand, offspring of older women may not be a child of a head because their mother and/or father is deceased. Offspring of older women are, on average, higher parity births and more likely to belong to families of lower socioeconomic status characterized by a more traditional family structure. Beyond behavioral, cultural, and demographic factors, the rates are affected by errors in calculating the distribution of surviving offspring, misreporting of age and relationship and other errors affecting the census data, and the inclusion of stepchildren, in-laws, and adopted children in the numerator.

Variation in the likelihood of older children being the offspring of a head also reflects intraclass variation. Because members of any cohort with older mothers are older than members of their cohort with younger mothers, they are less likely to live at home.

The remainder of table 19 is devoted to procedures used to allocate the number of sons among the three household types. The principle underlying the calculations is that children will be distributed among households in proportion to the prevalence of these households. If the number of single-headed households increases relative to the number of intact households, then the number of children residing in single-headed households will increase in similar fashion. The principle is made operational in the following way. For each age group, the distribution of households by type and the distribution of sons of household heads by type of household are both calculated. For example, intact households make up 90.3 percent of the

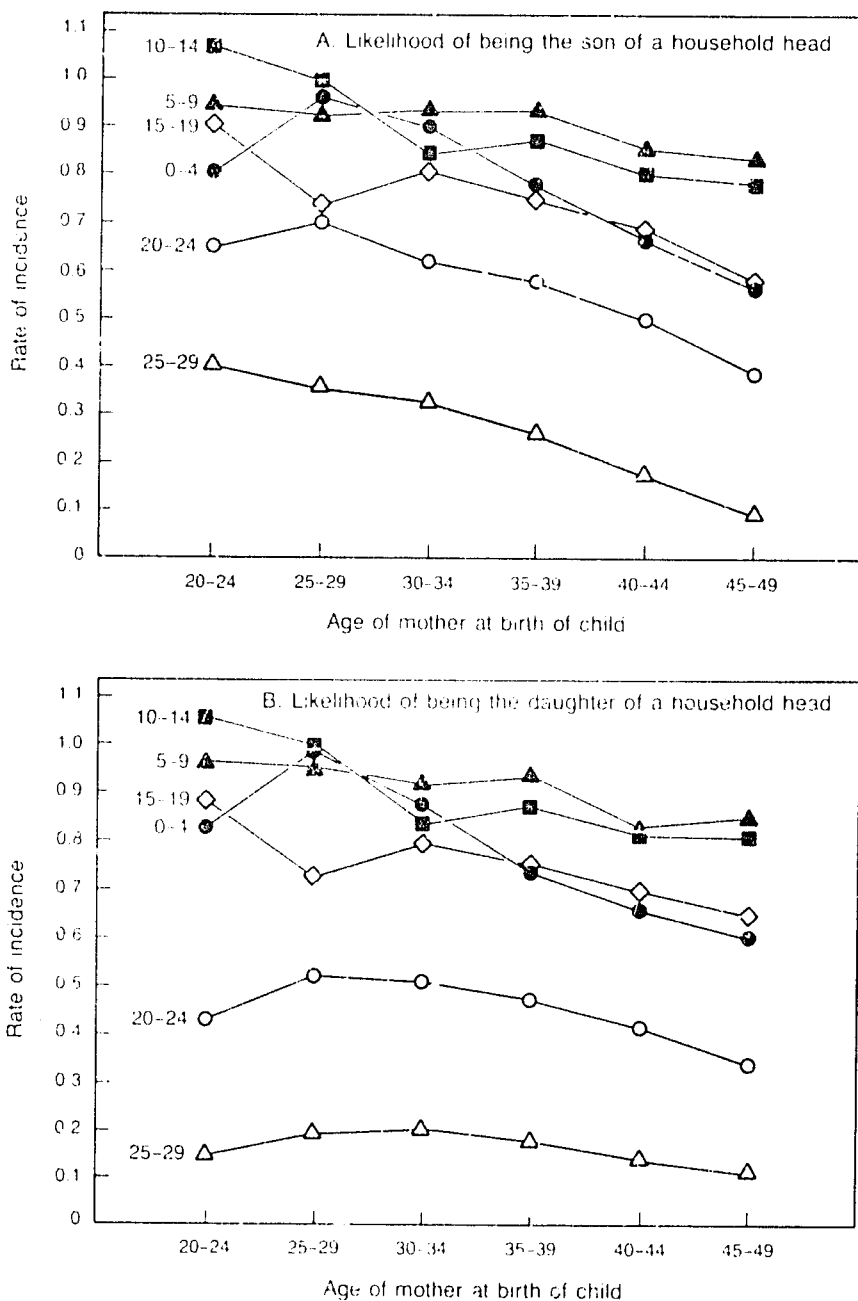


Figure 6. Likelihood of a child, age 0-29, being the offspring of a household head, by age of mother: Republic of Korea, 1980

households with a female head or spouse ages 25-29 but contain 93.3 percent of the children. The ratio of the two values is 1.034, which means that intact households have 3.4 percent more than their share of sons of a household head. This value, designated λ , is held constant throughout the projections. The pattern of λ shown in table 19 is fairly typical. Intact households generally have somewhat more than their share of children, which one would expect of a group with childbearing patterns currently uninterrupted by divorce, widowhood, or the absence of the spouse for some other reason. Single male heads have well below their share of children because when husband and wife are living apart, children are more likely to live with the mother. Conversely, single female heads typically have close to their *pro rata* share of children despite the interrupted state of their marriage.

Number of grandchildren

Among those in the population under age 15 who are not designated children of a household head, the great majority are grandchildren of a head. Among girls under age 5, between 8 and 22 percent are grandchildren of a household head (table 20). The likelihood of being a grandchild of a household head declines rapidly with age. No more than 11 percent of those ages 5-9 and no more than 7 percent of those ages 10-14 are grandchildren of a household head. This decline is most often associated with the establishment of separate households by the grandchild's parents, but in some cases it is associated with a shift in the headship designation from the child's grandparents to the child's parents, entailing no change in the composition of the household.

The information used to estimate the number of surviving offspring who are candidates to be children of a head can be readily applied to estimate the number who are candidates to be grandchildren of a head. Projec-

Table 20. Proportion of girls under age 15 who are grandchildren of a household head: Six Asian countries, 1970-1980

Country (year)	Age group		
	0-4	5-9	10-14
Indonesia (1976)	.11	.06	.05
Republic of Korea (1970)	.10	.06	.04
Republic of Korea (1980)	.11	.06	.04
Malaysia (1980)	.17	.11	.07
Philippines (1975)	.08	.05	.03
Taiwan (1980)	.13	.05	.02
Thailand (1970)	.15	.09	.05
Thailand (1980)	.22	.11	.07

tions of the number of children of a household head yield the number of daughters at each childbearing age. Estimates of the candidates for grandchild status are obtained by applying surviving offspring per mother ratios. If childbearing rates for daughters of household heads are identical to childbearing rates for women in general the calculated values will be equal to the number of surviving grandchildren of heads residing in or out of the household. The ratio of the observed number of grandchildren to the calculated "expected" number in the base year constitutes the rates used to project the number of grandchildren.

Table 21 shows an application of the procedure to Korean data. The grandchild ratio varies around 1 depending on the age of the household head's wife and the type of household. A value of 1 is observed when daughters of heads have fertility rates identical to women in general and all of their children live with them. The substantial variation in the grandchild rates is primarily a consequence of differences in fertility between daughters of heads and women who have established separate households. This is particularly evident among households with young heads. Their daughters of childbearing age are themselves young—at an age at which there is considerable variation in children ever born. Because childbearing is associated with the establishment of separate households, women who remain in their primary household will have lower fertility than those who do not. Thus, the number of observed grandchildren will be considerably fewer than the "expected." The women residing in households with older heads are at an age at which there is relatively little variation in children ever born. Most of these women have started their childbearing but remain at home; few have not yet begun to build their families. Thus, the number

Table 21. Illustration of methodology for calculating the number of grandchildren of household heads: Republic of Korea, 1980

Age of principal female	Household type								
	Intact			Male head			Female head		
	Ex-			Ex-			Ex-		
	Actual	pected	Ratio	Actual	pected	Ratio	Actual	pected	Ratio
40-44	4,170	19,798	.211	835	1,233	0.677	208	3,311	0.063
45-49	25,449	53,794	.473	2,457	2,891	0.850	4,822	10,713	0.450
50-54	49,399	62,387	.792	4,109	3,853	1.066	9,457	17,092	0.553
55-59	48,373	48,373	1.000	4,902	4,055	1.209	11,557	16,401	0.692
60-64	28,602	26,396	1.084	3,200	2,923	1.266	8,303	9,864	0.841
65-69	13,208	10,895	1.212	2,296	1,792	1.281	5,567	5,076	1.097
70-74	4,310	2,952	1.460	1,013	760	1.333	1,927	1,614	1.194

Note: Based on 1980 census data on grandsons of ages 0-4, Republic of Korea.

of observed grandchildren will be much closer to the "expected" number and may be higher if fertility is higher in extended households.

In addition to these selectivity effects, childbearing by women living in three-generation households may differ systematically from that by women who do not. Members of such households may be more traditional in their outlook and have different socioeconomic characteristics. Moreover, extended families may encourage high fertility by reducing the opportunity costs of childbearing. In addition, childbearing by daughters of household heads may be positively associated with the age of their parents to the extent that they are more traditional in their outlook and have imparted their childbearing views to their daughters. Thus, it is not particularly surprising that the observed number of grandchildren exceeds the expected number in households with older heads.

Number of parents

The likelihood that an older woman will be the mother of a household head varies greatly among the countries studied (table 22). In Indonesia and Thailand in 1970, the proportion of women who are mothers of a household head does not exceed 30 percent in any five-year age group. In Taiwan and Korea, on the other hand, three-fourths or more of all women over age 75 are mothers of a household head.

Candidates for membership of households as a parent of a head consist of members of cohorts who have surviving offspring old enough to be household heads or wives of household heads. The population at risk, consisting of mothers, fathers, mothers-in-law, and fathers-in-law, is quantified as the average number of parents who would reside with their offspring if all parents lived with their children. For example, suppose that a household head had two surviving parents and four surviving siblings; the sur-

Table 22. Proportion of women over age 39 who are mothers of a household head: Six Asian countries, 1970-1980

Country (year)	Age group							
	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+
Indonesia (1976)	.02	.04	.07	.12	.18	.22	.25	.30
Republic of Korea (1970)	.03	.09	.21	.36	.50	.64	.73	.73
Republic of Korea (1980)	.01	.03	.11	.23	.39	.55	.68	.82
Malaysia (1980)	.01	.03	.09	.15	.24	.36	.43	.53
Philippines (1975)	.01	.01	.04	.06	.12	.17	.26	.36
Taiwan (1980)	.04	.14	.29	.48	.62	.73	.76	.75
Thailand (1970)	.00	.01	.03	.06	.11	.15	.21	.28
Thailand (1980)	.01	.02	.05	.09	.17	.26	.36	.47

living parents per offspring for this household would be 2 parents/5 offspring = 0.4. If, in addition, the head had a spouse with one surviving parent and one surviving sibling, surviving parents-in-law would be 1 parent/2 siblings = 0.5. The total value, 0.9, would be the expected number of parents if all parents lived with their offspring. For intact households, parents per offspring includes both parents and parents-in-law; for households headed by single persons, however, the supply of potential parents includes only the parents of the head and not parents of the absent spouse.

To calculate rates required for projections, the HOMES model combines estimates of available parents with census data on the number of parents who were, in the base year, residing in households headed by their offspring. Illustrative data for Malaysia are reported in Table 23.

The Malaysian pattern is similar to that observed elsewhere; the likelihood of co-residence increases rapidly with the age of the mother. Women who are ages 50-54 are much less likely to be the mother of a household head (and much more likely to be the spouse of a head) than women who are ages 70-74. Because the reported mothers of household heads include the mother of either the head or the spouse, a likelihood of two would be consistent with all women in a particular age group being the mother of a head. A value in excess of two is possible if mothers are more likely to reside with members of one age group rather than with members of another or if mothers are more likely to live with children who head households than with children who do not.

In the absence of behavioral changes governing household structure, many developing countries, particularly those far along in their demographic transitions, will experience an increase in the average number of parents per household. The Republic of Korea, for example, will experience

Table 23. Potential and actual mothers per offspring and the likelihood of co-residence: Malaysia, 1980

Age of mother	Mothers per offspring	Total surviving mothers	Reported mothers of head	Likelihood of co-residence
50-54	0.0503	8,203	1,673	0.204
55-59	0.0526	8,578	2,228	0.271
60-64	0.0365	5,952	2,685	0.451
65-69	0.0147	2,397	2,387	0.996
70-74	0.0064	1,044	1,433	1.373
75-79	0.0009	146	418	2.848

Note: Total surviving mothers calculated as product of mothers per offspring and number of households with Malay head and spouse of ages 30-34. In 1980, the census sample reported 163,080 households with the required characteristics.

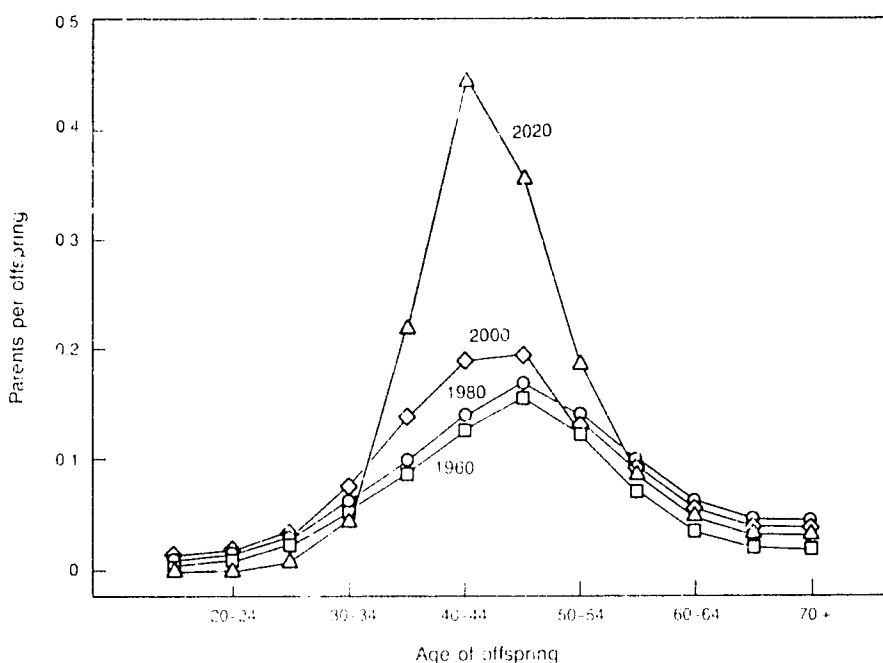


Figure 7. Actual and projected number of surviving parents ages 65 and older per surviving offspring, by age of offspring: Republic of Korea, 1960-2020

a substantial increase in the number of surviving parents per offspring. Figure 7 shows data on number of surviving parents ages 65 and older per offspring in 1960, 1980, and projected to 2000 and 2020. The shift between 1960 and 1980 is small, because, although mortality rates decreased substantially over the period, the probability of parents and of offspring surviving both increased so that there was a small net change in the ratio. The major increases are projected to occur after 1980. Elderly parents per offspring will increase by 15 to 40 percent by the year 2000 among offspring ages 30-49. The increase after 2000 is quite extraordinary. By the year 2020 elderly parents per offspring are projected to triple for offspring ages 40-44 and to double for offspring ages 45-49. The principal cause of the increase in parents per offspring is declining fertility. Surviving offspring will have far fewer surviving siblings with whom to share the responsibility of parental support. There is also some concentration of parents per offspring values within a narrower age range. Again, this reflects a concentration of fertility among women at prime childbearing ages.

Number of other household members

The "others" category includes all household members who are not otherwise included. Because the group is a catch-all, its size and composition varies from country to country. In the Republic of Korea, for example, about 5 percent of the civilian population falls into this category. Of these, one-third are not related to the household head. Of the two-thirds who are related, nearly nine in ten are the head's siblings. Other members tend to be concentrated in households headed by men and women in their 20s and 30s (Table 24). Depending on the type of household, between 75 and 85 percent of all other household members are between the ages of 15 and 30.

HOMES calculates the number of other household members of each age and sex as a residual. The number of individuals of each age who are heads, spouses, children, parents, or grandchildren of the head are totalled and subtracted from the total number of individuals of that age. The number of others of each age and sex are then distributed among households distinguished by type, age of head, and age of spouse in proportion to their occurrence in the base years.

Table 24. Number of other household members per thousand households, by household type: Republic of Korea, 1980

Age of head	Household type					
	Intact		Single male head		Single female head	
	Male	Female	Male	Female	Male	Female
20-24	149	99	719	685	594	742
25-29	158	113	677	644	261	397
30-34	134	101	400	360	122	159
35-39	96	81	237	228	91	109
40-44	71	60	161	164	88	89
45-49	60	55	117	126	82	77
50-54	52	51	125	142	81	63
55-59	42	48	75	92	65	63
60-64	42	48	60	70	86	72
65-69	44	43	62	66	84	85
70+	38	66	83	64	55	70

3 TECHNICAL DESCRIPTION OF THE MODEL

Conventions

All rates used to describe the number and composition of households are calculated from a 'base-year' survey or census. These data are differentiated by appending an *S*. For example, *N1* refers to the projected number of family households and *NS1* to the corresponding variables from the base-year survey or census.

Whenever practical, variables are indexed as follows. Sex of the household head or member is represented by *s*: 1 denotes males; 2 females; and 3, both sexes combined. Age of a household member is denoted by *a*, age of the principal male (head) by *x*, and age of the principal female (head or spouse of a head) by *w*. In households with no principal female, *w* is the age of the head. Age is measured in five-year age categories, with the upper age bracket, denoted by 18, including all those ages 85 and older. The summation across all age groups is denoted by setting *a* = *x*, or *w* to 19. Year is denoted by *t*.

Upper case letters are reserved for variables representing absolute magnitudes, such as the population or number of heads. Lower case letters are used to represent rates, parameters, and per capita or per household values.

Definition of variables

The variables used in the model are defined as follows.

N(s,a,t) and *NS(s,a)*

the population of sex *s* and age *a* projected to year *t* or from the base-year survey

Ni(type,s,a,w,t) and *NSi(type,s,a,w)*

the number of household members with relationship to head *i*, of sex *s* and age *a* living in households of type *type* with a principal female (head or spouse of head) aged *w* projected to year *t* (*Ni*) and for the base-year survey (*NSi*). *N1* and *NS1* equal the number of households, as well as the number of household heads.

Relationship (i)

- 1 - Head or spouse
- 2 - Child of head
- 3 - Parent of head
- 4 - Grandchild of head
- 5 - Other member
- T - All relationships combined

Household type (type)

- 1 - intact, head and wife present
- 2 - female head, no husband present
- 3 - male head, no wife present

$N8(s,x,t)$ and $N58(s,x)$

the number of primary-individual households with a head of sex s and age x , projected to year t and from the base-year survey.

$N5Ptsh,s,a,x,t)$ and $N55Ptsh,s,a,x)$

the number of non-head members of sex s and age a residing in primary-individual households with a head of sex sh and age x , projected to year t and from the base-year survey.

$OS(s,a,w,t)$ and $OS(s,a,w)$

the number of surviving offspring of sex s , age a , with mothers age w for the population, projected to year t and from the base-year survey.

$ri(type,s,a,w)$

rates of incidence of relationship i occurring among persons of sex s , age a , living in households of type $type$ with a principal female age w .

$r8(s,x)$ and $r9(s,x)$

headship rates for one-person households and primary-individual households.

$d(a,w,t)$ and $drt(a,w,t)$

offspring weights, the proportion of the population age a with a mother age w .

$ps(s,z,w,t)$ and $ph(s,z,w,t)$

number of parents of spouse per household and number of parents of head per household, where s and z are the sex and the age of the parents and w is the age of the principal female.

Calculating the number of households

Family households

The number of family households (those consisting of two or more related individuals) $N1$, in which the male householder³ is age x and the female householder is age w , both in five-year age groups, is calculated as:

$$N1(type, x, w, t) = r1(type, x, w)[b(type)N(1, x, t) + (1-b(type))N(2, w, t)] \quad (3)$$

$$b(1) = 0.5$$

$$b(2) = 0.0$$

$$b(3) = 1.0$$

for $type = 1$ to 3 and x and $w = 1$ to 18. *Type 1* refers to intact households (those with both husband and wife present). *Type 2* and *type 3* refer to female-headed and male-headed households, respectively, in which the head's spouse is not present. The number of households for $x \neq w$ is zero for *type 2* and *type 3* households. $N(1, x, t)$ and $N(2, w, t)$ are the male and female populations ages x and w , respectively, in year t . The headship rates, $r1$, are calculated from base-year data as:

$$r1(type, x, w) = NS1(type, x, w) / [b(type)NS(1, x) + (1-b(type))NS(2, w)] \quad (4)$$

$NS1$ gives the base-year number of households and NS gives the base-year populations.

Non-family households

The number of one-person households, $N9$, and the number of primary-individual households (households consisting of unrelated individuals), $N8$, are calculated by applying time invariant headship rates to year t populations.

$$\begin{aligned} N8(s, x, t) &= r8(s, x)N(s, x, t) \\ N9(s, x, t) &= r9(s, x)N(s, x, t) \end{aligned} \quad (5)$$

for $s = 1$ (male) or 2 (female) and $x = 1$ to 18. The headship rates, $r8$ and $r9$, are calculated from base-year data on population and households.

$$\begin{aligned} r8(s, x) &= N8(s, x) / NS(s, x) \\ r9(s, x) &= N9(s, x) / NS(s, x) \end{aligned} \quad (6)$$

Calculating the number of children of a household head

The HOMES model calculates the number of children of a household head as the product of four factors: (1) the number of surviving offspring, O ; (2) the likelihood that surviving offspring are children of a household head, $r2$; (3) the prevalence of households of each type, and (4) a variable, k , that quantifies the likelihood that a surviving offspring will be the child of a head in a household of each type. Both k and $r2$ are time invariant, whereas the number of surviving offspring and the prevalence of each household type vary over time. The number of children is calculated as:

$$\begin{aligned} N2(type, s, a, w, t) &= O(s, a, t) \cdot r2(s, a, w) \cdot k(type, s, a, w) \\ &\quad \cdot [N1(type, 19, w, t) + N1(1, 19, w, t) + N1(2, 19, w, t) + N1(3, 19, w, t)] \end{aligned} \quad (7)$$

where a is the age of the child and w is the age of the female householder.

The likelihood that surviving offspring are children of a head is calculated, using the base-year population, as:

$$r2(type, s, a, w) = NS2(type, s, a, w) / OS(s, a, w) \quad (8)$$

for $type = 1$ to 4, $sex = 1$ or 2, and a and $w = 1$ to 18, where $type$ 4 is the summation across $type$ 1 to $type$ 3. NS2 and OS are the children of the head and the surviving offspring, respectively.

The factor k captures the usually observed tendency for children from nonintact households to reside with their mothers rather than with their fathers. Thus, for $type$ 2 households, k is generally greater than 1 and for $type$ 3 households generally less than 1. The factor is calculated by:

$$k(type, s, a, w) = [r2(type, s, a, w) / r2(4, s, a, w)] \cdot \{NS1(type, 19, w) / [NS1(1, 19, w) + NS1(2, 19, w) + NS1(3, 19, w)]\}, \quad (9)$$

The number of surviving offspring in the base year and in projection years is calculated as:

$$\begin{aligned} OS(s, a, w) &= dr(s, a, w) \cdot NS(s, a) \\ O(s, a, w, t) &= dr(a, w, t) \cdot N(s, a, t) \end{aligned} \quad (10)$$

where dr (abs for the base year) gives the proportion of all surviving offspring age a who have mothers (or fathers for $type$ 3 households) age w . For a detailed discussion of the methodology used to estimate dr , see the section on offspring weights below.

Calculating the number of grandchildren of a household head

The number of grandchildren varies with the number of women of child-rearing age who are the daughters of a household head and with their childbearing behavior. The number of grandchildren is calculated by:

$$N4(type, s, a, w, t) = r4(type, s, a, w) \cdot NI4(type, s, a, w, t) \quad (11)$$

where $NI4$ would be the expected number of grandchildren if all grandchildren lived with their mothers and if childbearing and co-residence patterns of daughters of heads were identical to those of all women of the same age. The expected number of grandchildren is equal to:

$$NI4(type, s, a, w, t) = \sum_{x=1}^{18} \{N2(type, 2, x, w, t) \cdot [O(s, a, x, t) / N(2, x, t)] \cdot r2(4, s, a, x)\}. \quad (12)$$

The grandchild rate of incidence varies from 1.0 as the childbearing and co-residence patterns of daughters of household heads differ from those of women in general. The rate is calculated from base-year data as:

$$r4(type, s, a, w) = NS4(type, s, a, w) / NI4(type, s, a, w) \quad (13)$$

where the expected number of grandchildren in the base-year is calculated with base-year data substituted into equation (12).

Calculating the number of parents of a househead head

The number of parents of a household head varies with the availability of parents:

$$\begin{aligned} N3(type, 2, z, w, t) &= r3(type, 2, z, w) \cdot N1(type, 19, w, t) \\ &\quad [k4(type) \cdot ps(2, z, w, t) + k5(type) \cdot phi(2, z, w, t)] \\ N3(type, 1, z, w, t) &= r3(type, 1, z, w) \cdot N1(type, 19, w, t) \\ &\quad [k4(type) \cdot ps(1, z, w, t) + k5(type) \cdot phi(1, z, w, t)] \end{aligned} \quad (14)$$

where $ps(2, z, w, t)$ and $phi(2, z, w, t)$ are the per household surviving mothers and mothers-in-law age z of spouses age w in year t , and $ps(1, z, w, t)$ and $phi(1, z, w, t)$ are the surviving fathers and fathers-in-law. The dummy variables $k4$ and $k5$ vary by household type, excluding parents or absent spouses in *type* 2 and *type* 3 households. The values are:

<i>Type</i>	$k4$	$k5$
1	1	1
2	1	0
3	1	0

The supply of mothers and fathers varies with the number of surviving mothers but also with the number of surviving siblings because potential responsibility for parents is shared among surviving offspring. Mothers of the principal female (head for *type* 3) per household is calculated as:

$$ps(2, z, w, t) = d(w, z, t) \cdot N(2, z, t) \cdot \sum_{v=1}^{18} d(v, z, t) \cdot [N(1, v, t) + N(2, v, t)] \quad (15)$$

Mothers of the household head per household for intact households is given by:

$$phi(2, z, w, t) = \sum_{v=1}^{18} [N1(1, v, w, t) \cdot N1(1, v, 19, t)] \cdot ps(2, z, w, t) \quad (16)$$

Fathers of the principal female (head for *type* 3) per household is calculated as:

$$\begin{aligned} ps(1, z, w, t) &= \sum_{y=1}^{18} \{ps(2, y, w, t) \cdot [N1(1, z, y, t) \cdot N1(1, z, 19, t)] \\ &\quad [N(1, z, t) \cdot N(2, y, t)]\} \end{aligned} \quad (17)$$

Fathers of the household head per household for intact households is calculated as:

$$ph(1,z,w,t) = \sum_{i=1}^{18} [NI(1,s,w,t) - NI(1,s,w,19,t)] \cdot ps(1,z,w,t) \quad (18)$$

The average rate of incidence, calculated from base-year data, approaches 1.0 to the extent that parents universally live with their offspring. The value may exceed 1.0 for particular groups of households to the extent that there is differential selection by parents. The rate of incidence for mothers is calculated from base-year data by:

$$r3(type,2,z,w) = [NS3(type,2,w) - NS1(type,19,w)] / [k4(type) \cdot pss(2,z,w) + k5(type) \cdot phs(2,z,w)] \quad (19)$$

and the rate of incidence for fathers by

$$r3(type,1,z,w) = [NS3(type,1,w) - NS1(type,19,w)] / [k4(type) \cdot pss(1,z,w) + k5(type) \cdot phs(1,z,w)] \quad (20)$$

where pss and phs are calculated by substituting base-year data into equations (15) to (18).

Calculating the number of other household members

The HOMES model calculates the total number of other household members in each age and sex group as the residual of individuals not otherwise allocated to household membership. The residual is distributed among family households and primary-individual households in proportion to the observed distribution per household in the base year and to the projected number of households of each type. Other members are calculated as:

$$\begin{aligned} N5(type,s,a,w,t) &= k6(s,a,t) \cdot r5(type,s,a,w) \cdot N1(type,19,w,t) \\ N5P(sh,s,a,x,t) &= k6(s,a,t) \cdot r5p(sh,s,a,x) \cdot N8(sh,x,t) \end{aligned} \quad (21)$$

where $N5P(sh,s,a,x,t)$ is the number of other members of sex s and age a residing in year t in primary-individual households with heads of sex sh and age x . The term, $k6$, is calculated to ensure that all residual members are distributed. The rates of incidence are calculated from base-year data as:

$$\begin{aligned} r5(type,s,a,w) &= NS5(type,s,a,w) / NS1(type,19,w) \\ r5p(sh,s,a,x) &= NS5P(sh,s,a,x) / NS8(sh,x) \end{aligned} \quad (22)$$

Calculating offspring weights

Offspring weights ($u(a,w,t)$) are calculated using procedures first described by Mason and Martin (1982). The number of surviving offspring age a of women age w in year t is equal to:

$$O(3,a,w,t) = p(a,t) \cdot B(w-a,t-a) \quad (23)$$

where $p(a,t)$ is the probability of surviving from birth to age a in year t and $B(a-a,t-a)$ is the total number of births to women age $a-a$ in year $t-a$. The total number of surviving offspring at age a in year t , equal to the population age a in year t , is found by summing across a :

$$N(a,t) = p(a,t) \sum_a B(a-a,t-a) \quad (24)$$

Dividing equation (23) by equation (24) yields the offspring weights:

$$d(a,a,t) = [O(3,a,t) N(a,t)] / [B(a-a,t-a) - \sum_a B(a-a,t-a)] \quad (25)$$

Offspring weights for any cohort are equal to the age distribution of births in the year of the cohort's birth. The number of surviving offspring, O , is calculated as the product of the offspring weights and the current population of the cohort. The same weights apply to male and female offspring.

The model estimates the number of births to each cohort of women from information on age-specific fertility rates,⁴ and the number of women belonging to the cohort. A crude approximation could be obtained by using a simple average, setting k to 2.5, so:

$$B(a-a,t-a) = [5-k(a-1,t-1)] \theta(a-a,t-a-1) N(2,a-a-1,t-a-1) \\ + s(a,t) \theta(a-a,t-a) N(2,a-a,t-a) \quad (26)$$

This, however, yields an inadequate estimate because age-specific fertility rates vary so substantially within age categories. The fertility exposure of a cohort of women uniformly distributed from ages 15 to 19 is, over the following five years, concentrated at ages 19 and 20 (36 percent of the total exposure) and very limited at the extreme ages of 15 and 24 (4 percent of the total exposure.) This problem is circumvented by allowing k to vary with the pattern of fertility, accounting for the within-age-group variation by adding to the equation the age-specific fertility rates for adjacent five-year age groups and the mean age of childbearing.

The values of k were estimated using data from Coale and Trussell's model fertility schedules:

$$\begin{aligned} k(3,t) &= 0.0 \\ k(4,t) &= 0.87913 + 1.7969 R(4,t) \\ k(5,t) &= -0.75512 + 1.1605 R(5,t) + 0.069187 M(t) \\ k(6,t) &= 3.5797 + 0.049133 R(6,t) + 0.037807 M(t) \\ k(7,t) &= 2.3736 + 0.16486 R(7,t) \\ k(8,t) &= 2.4459 + 0.10441 R(8,t) \\ k(9,t) &= 2.8262 + 0.093475 R(8,t) \\ k(10,t) &= 3.4582 + 0.010980 R(9,t) \text{ if } R(9,t) \text{ is defined} \\ &= 0 \text{ if } R(9,t) \text{ is not defined} \end{aligned} \quad (27)$$

where $R(a) = f(a, t)/f(a+1, t)$ is the ratio of the fertility rates of adjacent age groups and M is the mean age of childbearing. The births to women age a in year t is approximated by substituting for k in equation (26).

Adjusting offspring weights

Offspring weights must be adjusted to allow for the fact that some offspring live only with their fathers in *type 3* households. To calculate the number of children of a head the model uses a weighted average of $d(a, w, t)$ and offspring weights specific to the age of husbands $dh(a, w, t)$:

$$d(a, w, t) = w(a, t)du(a, t) + (1-w(a, t))dh(a, w, t) \quad (28)$$

where the weight is the proportion of households with the principal female present. The revised weights are normalized to sum to 1.0.

Offspring weights for fathers must be approximated using a crude procedure because fertility rates specific to the father's age are not generally available. Hence, dh is calculated by assuming that fertility is independent of the father's age (given the age of his wife) so that dh can be calculated as a weighted average of the corresponding values of d by:

$$dh(a, w, t) = d(a, t)Nf(a, w, t)/Nf(1, w, t) \quad (29)$$

where the dh weights are normalized so that they sum (across w) to total 1.

Reliability of procedures

The procedures are designed to reproduce household characteristics of a population in a census or survey year. For several reasons, however, calculated values for the base year do not exactly reproduce census values. First, rates based on a sample are subject to sampling variance. Second, in most cases census editing procedures do not apply consistency checks to data on the relationship of household members to household head. Thus, tabulations include, for example, children of a head who are older than either the head or the spouse. The HOMES model essentially edits out such cases as part of the calculation process and includes them as "other" household members. Third, census data are subject to underenumeration and age-misreporting; no acceptable procedures have been established for adjusting the number of households and household members. The HOMES model calculates adjusted estimates by applying headship and membership rates to adjusted population data. This procedure is appropriate to the extent that age misreporting and underenumeration of individuals are independent of the relationship of a household member to the household head.

4 RUNNING HOMES

HOMES can be conceptualized as consisting of two components or stages. In stage 1 the rules governing household formation and composition are determined from base-year data. In stage 2 the number and composition of households are projected by applying the rules determined in stage 1 to projected population data. Stages 1 and 2 are generally run separately. Stage 2 may be run repeatedly to obtain alternative household projections based on alternative projections of the population. Stage 1, in contrast, will be run only rarely—generally after a census or major national survey.

This section includes instructions for setting up the data input for stage 1 and stage 2. The current release of HOMES includes stage 1 output from a recent census, so that the user is not required to run stage 1. Documentation for stage 1 is provided mainly for informational purposes; the user is not required to prepare any of the stage 1 input files. Instructions for converting HOMES data files into SAS files and two programs for generating summary tables are also provided. These programs were used to create most of the tables presented in section 1 of this reference guide. These programs can be used only on systems that support SAS including PROC MATRIX routines. Summaries of HOMES programs are provided in Appendix B.

Data input for stage 1: Rate calculations

Data input for stage 1 is contained in four files. The first file, *country.HW.DATA*, contains data on the base-year population and on household heads. The second file, *country.MEM.DATA*, contains data on household members, and the third file, *country.IGW.DATA*, contains base-year intergenerational weights. The fourth file, *country.CIV.DATA*, contains data on the proportions of the total population that are institutionalized or in the military and that are therefore excluded from the household population.

Population data for lines 1 and 2 of the *country.HW.DATA* input file (Exhibit A) are generally available from published statistical reports. If possible, data should be adjusted for age-misreporting and underenumeration. The survey population data in lines 3 and 4 come from the census or survey tabulations and should include only the civilian, non-institutionalized population. Lines 5 through 29 are tabulated from the census or survey. Data are formatted 19F10.0 (right justified within ten-column blocks).

Data for input file *country.MEM.DATA* (Exhibit B) are obtained by tabulation from survey or census sample. Exact definitions of relationship categories may vary from country to country. Children and grandchildren should, however, include adopted children, children-in-law, and stepchildren; parents should include parents of either the head or the spouse as well as stepparents. "Others" is a residual category that must include all

Exhibit A. Input file: country.HW.DATA

Line no.	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	Total
	<i>NS(s,x)</i> --Total population for base year (format: 19F10.0)																		
1	Males																		
2	Females																		
	<i>NS(s,x)</i> --Survey population																		
3	Males																		
4	Females																		
	<i>NS1(type,x,w)</i> --Number of households																		
	<i>Type 1</i>	←-----Age of spouse (<i>w</i>)-----→																	
	Males																		
	Age of																		
	Husband (<i>x</i>)																		
5	0-4																		
6	5-9																		
.	.																		
.	.																		
22	85+																		
23	Total																		
24	<i>Type 2</i>	←-----Age of head (<i>w</i> for <i>Type 2</i> , <i>x</i> for <i>Type 3</i>)-----→																	
25	<i>Type 3</i>																		
	<i>NS8(s,x)</i> --Primary-individual households																		
26	Males																		
27	Females																		
	<i>NS9(s,x)</i> --One-person households																		
28	Males																		
29	Females																		

household members, including employees and other unrelated members, not otherwise classified. Data are formatted 19F10.0 (right justified within ten-column blocks).

Base-year weights used in the country.ICW.DATA file (Exhibit C) are calculated in accordance with the technical description, equations (25), (26), and (27), using historical times series of age-specific fertility rates and population. Base-year weights are available for the Asian countries referred to in Section 2 and for all OECD countries.

The proportions in country.CIV.DATA (Exhibit D) must be calculated based on independent data sometimes available in census publications. Lines 1 and 2 are the proportions of the total population in the military and not the household population. Lines 3 and 4 are the proportions of

Exhibit B. Input file: country.MEM.DATA

Line no.	Age of member	Age of spouse or head					85+	Total
		0-4	5-9	10-14	15-19	20-24		
<i>NS2(type,s,a,w)</i> —Number of children (format: 19F10,0)								
	<i>Type 1</i>							
	Males							
1	0-4							
2	5-9							
.	.							
.	.							
18	85+							
19	Total							
20-38	Females							
	<i>Type 2</i>							
39-57	Males							
58-76	Females							
	<i>Type 3</i>							
77-95	Males							
96-114	Females							
<i>NS3(type,s,a,w)</i> —Number of parents of head								
	<i>Type 1</i>							
115-133	Males							
134-152	Females							
	<i>Type 2</i>							
153-171	Males							
172-190	Females							
	<i>Type 3</i>							
191-209	Males							
210-228	Females							
<i>NS4(type,s,a,w)</i> —Number of grandchildren of head								
	<i>Type 1</i>							
229-247	Males							
248-266	Females							
	<i>Type 2</i>							
267-285	Males							
286-304	Females							
	<i>Type 3</i>							
305-323	Males							
324-342	Females							

Exhibit B. Input file: country.MEM.DATA (continued)

Line no.	Age of member	Age of spouse or head					85 +	Total
		0-4	5-9	10-14	.	.		
NS5(<i>type,s,a,w</i>)--Number of other members								
Type 1								
343-361	Males							
362-380	Females							
Type 2								
381-399	Males							
400-418	Females							
Type 3								
419-437	Males							
438-456	Females							
NS5P(<i>sh,s,a,w</i>)--Number of other members, P.I. HH's								
Male heads								
457-475	Males							
476-494	Females							
Female heads								
495-513	Males							
514-532	Females							

Note: For *type 3* households, data are *NS5P(type,s,a,x)* (members are distributed by age of father).

Exhibit C. Input file: country.IGW.DATA

Line no.	Age of offspring	Age of mother					85 +	Total
		0-4	5-9	10-14	.	.		
<i>dta,w</i> --Intergenerational weights								
1	0-4	(format: 8F10.4/8F10.4/3F10.4)						
2	5-9							
.	.							
.	.							
18	85+							
19	Total							

Exhibit D. Input file: country.CIV.DATA

Line no.	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	Total
	RMN(S,X)---Proportion of total population in military																		
1	Males (format: 19F10.5)																		
2	Females																		
	RIN(L,X)---Proportion of civilian population institutionalized																		
3	Males																		
4	Females																		

the civilian population living in institutions. If only combined data are available, lines 1 and 2 can be the proportions of the total population excluded from the household population because of military service or institutionalization. Lines 3 and 4 are then set to zero. If this procedure is followed, the projected institutionalized population will be included with the military population. The data format is 19F10.5, (right justified within ten-column blocks) with provision for five decimal places.

Data input for stage 2: Household projections

Data input for stage 2 includes headship and relationship to head rates calculated from stage 1, base-year intergenerational weights, and proportions of military and institutionalized populations, all of which are generally provided as part of the projection package. Most users will create files containing only the projected population data and age-specific fertility rates, as specified below.

The first line of input file country.POP.DATA (Exhibit E) contains *startyr*, the year for population data contained in lines 2 and 3, and *endyr*, the year for population contained in the last lines. Data must be entered beginning in the first column as four digits (for example, 1950) followed by a one-column space and four digits. Population data are entered in eighteen ten-column blocks right justified within each block (formatted as 18f10.0).

The projection period is not determined by *startyr* and *endyr*. It may begin after *startyr* and terminate before *endyr*. Thus, the population file and the fertility file can contain data for non-projection years. HOMES can also project backwards; that is, it can calculate for years before the base year so that *startyr* may be less than the base year.

In input file country.FERT.DATA (Exhibit F), fertility rates are births per year per 1,000 women in each age group. Data input provides for two decimal places, and data must be entered formatted 7F10.2 (right justified within 10 ten-column blocks) with two digits to the right of the decimal point.

Exhibit E. Input file: country.POP.DATA

Line no.	Year & sex	Age					
		0-4	5-9	10-14	.	.	85+
1		<i>Startyr Endyr</i> 'comment if any' (format: I4, I5)					
		<i>N(s,x)</i> —Population in five-year age groups (format: 18F10.0)					
		<i>Startyr</i>					
2	Male						
3	Female						
		<i>Startyr + 5</i>					
4	Male						
5	Female						
.	.						
.	.						
		<i>Endyr</i>					
.	Male						
.	Female						

Exhibit F. Input file: country.FERT.DATA

Line no.	Year	Age			
		15-19	20-24	.	45-49
1		<i>Startyr Endyr</i> 'comment if any' (format: I4, I5)			
		<i>f(a,t)</i> —age-specific fertility rates (format: 7F10.2)			
2	<i>Startyr</i>				
3	<i>Startyr + 5</i>				
.	.				
.	.				
.	<i>Endyr</i>				

5 DESCRIPTION OF OUTPUT

For males and females tabulated in five-year age groups, HOMES determines the relationship to the head of household, the type of household in which the individuals reside, and the age (in five-year intervals) of the head or spouse of the household in which the members reside at five-year

Exhibit G. Table of contents for HOMES output

Output pages	Description
99-101	Population in five-year age groups by sex; civilian, non-institutional; military; institutional.
102-104	Number of intact and single-headed households by age and sex of head.
105-106	Number of primary-individual and one-person households by sex and age of head.
107	Number of intact households by age of head and age of spouse.
108-113	Number of children in intact and single-headed households by age and sex of children and age of principal female (head, if female; spouse of head, otherwise).
114-119	Number of parents in intact and single-headed households by age and sex of parents and age of principal female (head, if female; spouse of head, otherwise).
120-125	Number of grandchildren in intact and single-headed households by age and sex of grandchildren and age of principal female (head, if female; spouse of head, otherwise).
126-135	Number of other members in intact, single-headed, and primary-individual households by age and sex of other members and age of principal female (head, if female; spouse of head, otherwise).
136-145	Total number of members in intact, single-headed, and primary-individual households by age and sex of members and age of head (single-headed and primary-individual-households) or spouse (intact households).
146-147	Total number of members in all households combined by age and sex of members and age of wife or head.

Note. Output page numbers begin with 99 because 1990 projection is reported and base year for run is 1980.

time intervals. The table of contents for the HOMES output (Exhibit G) and an example of the printed output is provided in this section. These data are also written to computer files to facilitate further analysis and the preparation of summary tables and measures.

The three output files for the HOMES model (Exhibit H) contain data on household head (country.N1.DAT); children, parents, grandchildren, and other household members (country.N2.DAT); and total household members (country.NT.DAT). The data are written to files in the same order as they are printed, using 19 columns and the format 19F10.0.

Exhibit H. Output files for HOMES

File name	Description of contents (row numbers)
country.N1.DAT:	Number of intact households (1) Number of single-headed households (2-3) Number of spouses of head, <i>type 1</i> households (4-22) Number of primary-individual households (23-24) Number of one-person households (25-26)
country.N2.DAT:	Number of children, males and females Intact households (1-38) Single-headed households, female head (39-76) Single-headed households, male head (77-114) Number of parents, males and females Intact households (115-152) Single-headed households, female head (153-190) Single-headed households, male head (191-228) Number of grandchildren, males and females Intact households (229-266) Single-headed households, female head (267-304) Single-headed households, male head (305-342) Number of other members, males and females Intact households (343-380) Single-headed households, female head (381-418) Single-headed households, male head (419-456) Primary-individual households, male head (457-494) Primary-individual households, female head (495-532)
country.NT.DAT:	Total number of members, males and females Intact households (1-38) Single-headed households, female head (39-76) Single-headed households, male head (77-114) Primary-individual households, male head (115-152) Primary-individual households, female head (153-190) One-person households, male (191) One-person households, female (192)

1990 KOREA

TOTAL POPULATION
CIVILIAN, NON-INSTITUTIONAL

MALE

0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	
2280735.	2247203.	2032285.	2214951.	1578904.	2144731.	1976637.	1506582.	1250031.	
45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
1090971.	1014352.	753116.	488421.	364073.	213613.	95777.	42002.	15818.	21330096.

FEMALE

0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	
2115903.	2073413.	1882597.	2019217.	2053120.	2111832.	1960858.	1450033.	1171156.	
45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
1074362.	1025146.	848721.	660207.	525376.	361936.	212988.	119111.	57010.	21722896.

1990 KOREA

OUTPUT PAGE 99

POPULATION

1940 KURIA

TOTAL POPULATION
MILITARY

MALE

0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	
0.	0.	163.	18676.	645848.	47826.	40816.	25421.	15332.	
45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
7867.	3161.	1050.	357.	171.	73.	32.	14.	5.	856816.

FEMALE

0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	
0.	0.	95.	767.	2412.	1380.	1140.	756.	575.	
45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
463.	380.	128.	99.	68.	44.	26.	16.	7.	8349.

1940 KURIA

OUTPUT PAGE 100

POPULATION

1990 KURIA

TOTAL POPULATION
INSTITUTIONAL

54

MALE

0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	
0.	0.	9371.	46726.	40983.	30113.	7162.	3588.	2819.	
45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
2987.	2155.	1456.	876.	562.	598.	359.	197.	72.	150422.

FEMALE

0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	
0.	0.	10031.	95855.	59948.	9759.	3831.	2106.	2124.	
45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
1770.	1756.	1215.	1144.	642.	922.	664.	470.	147.	192429.

1990 KURIA

OUTPUT PAGE 101

POPULATION

1990 KURFA

NUMBER OF HEADS
INTACT HOUSEHOLDS
MALE

- AGE OF HEAD -									
0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	
0.	0.	0.	2558.	94958.	947733.	1530632.	1421148.	1217571.	
45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
960896.	705891.	649340.	433821.	276762.	137783.	46786.	14211.	3718.	8473903.

1990 KUREA

OUTPUT PAGE 102

NUMBER OF HEADS

1990 KUREA

NUMBER OF HEADS
SINGLE HEADED HOUSEHOLDS. FEMALE HEADS
FEMALE

- AGE OF HEAD -								
0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44
0.	0.	0.	21877.	66553.	64890.	97651.	116677.	128216.
45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
161937.	186012.	151055.	92646.	57626.	30273.	13671.	5564.	1565.
TOTAL								
1195509.								

1990 KUREA

NUMBER OF HEADS									
SINGLE HEADED HOUSEHOLDS, MALE HEADS									
MALE									
AGE OF HEAD									
0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	
0.	0.	0.	29214.	79728.	114524.	40875.	23352.	21726.	
45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
24673.	34826.	32835.	25655.	23925.	17128.	7749.	5378.	2300.	493137.

1990 KUREA

OUTPUT PAGE 104

NUMBER OF HEADS

1990 KUPIA

NUMBER OF HEADS
PRIMARY INDIVIDUAL HOUSEHOLDS

MALE HEADS

0-4	5-9	10-14	15-19	- AGE OF HEAD -		30-34	35-39	40-44	
				20-24	25-29				
0.	0.	0.	22460.	18817.	13358.	2639.	1519.	951.	
45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
936.	818.	459.	351.	345.	236.	94.	37.	0.	63070.

FEMALE HEADS

0-4	5-9	10-14	15-19	- AGE OF HEAD -		30-34	35-39	40-44	
				20-24	25-29				
0.	0.	0.	21382.	24206.	1574.	3660.	2182.	1513.	
45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
1544.	1744.	2269.	1893.	1470.	847.	259.	137.	131.	70811.

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1990 KURFA

OUTPUT PAGE 105

NUMBER OF HEADS

1990 KURUA

NUMBER OF HEADS
ONE PERSON / HOUSEHOLDS

MALE HEADS

- AGE OF HEAD -									
0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	
0.	0.	0.	20977.	35933.	52610.	18344.	9726.	7609.	
45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
8745.	11104.	7310.	6804.	4581.	3192.	2232.	738.	341.	190495.

FEMALE HEADS

- AGE OF HEAD -									
0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	
0.	0.	0.	17397.	47346.	28654.	20582.	14417.	12877.	
45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
16534.	10905.	60458.	45674.	40386.	25796.	13697.	5334.	2822.	362579.

1990 KURUA

OUTPUT PAGE 106

NUMBER OF HEADS

NUMBER OF INTACT HOUSEHOLDS
AGE OF HEAD AND WIFE

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF WIFE -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	754.	671.	181.	0.	224.	214.	214.	0.
20-24	0.	0.	0.	10635.	25569.	6781.	259.	165.	108.	125.	0.
25-29	0.	0.	0.	14525.	393670.	477633.	14676.	673.	503.	18944.	0.
30-34	0.	0.	0.	2164.	154603.	463015.	494190.	15704.	386501.	11427.	0.
35-39	0.	0.	0.	127.	11104.	217052.	784072.	386501.	602837.	331427.	0.
40-44	0.	0.	0.	52.	1107.	22525.	231737.	602837.	159922.	480754.	0.
45-49	0.	0.	0.	110.	366.	3576.	25463.	159922.	480754.	149233.	0.
50-54	0.	0.	0.	62.	557.	1486.	4320.	231737.	7762.	33307.	0.
55-59	0.	0.	0.	0.	366.	567.	1632.	7931.	7762.	2492.	0.
60-64	0.	0.	0.	0.	269.	719.	522.	2905.	553.	296.	0.
65-69	0.	0.	0.	0.	174.	194.	231.	1039.	1002.	53.	0.
70-74	0.	0.	0.	54.	31.	59.	71.	57.	53.	58.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	24492.	640960.	1594093.	4557293.	1200726.	1026268.		

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15-19	165.	240.	56.	0.	0.	0.	0.	0.	0.	2558.
20-24	210.	71.	220.	0.	1.	0.	0.	0.	0.	94059.
25-29	274.	69.	219.	0.	0.	0.	69.	0.	0.	897733.
30-34	101.	75.	78.	0.	0.	0.	0.	0.	0.	1530637.
35-39	816.	122.	73.	67.	72.	0.	0.	0.	0.	142148.
40-44	21191.	424.	317.	54.	57.	0.	52.	0.	0.	1212571.
45-49	202119.	13725.	517.	194.	0.	0.	0.	0.	0.	966896.
50-54	385701.	209789.	10915.	457.	146.	0.	74.	0.	0.	785891.
55-59	153526.	288454.	150507.	12090.	430.	135.	0.	0.	0.	649340.
60-64	35565.	116354.	168877.	89477.	11180.	597.	0.	0.	0.	633821.
65-69	10144.	31687.	78743.	89717.	53031.	6737.	272.	0.	0.	276762.
70-74	2876.	10084.	19587.	37066.	41357.	21968.	2909.	64.	0.	137783.
75-79	586.	1324.	4471.	7937.	13464.	11310.	6480.	672.	0.	46786.
80-84	56.	355.	1106.	2031.	797.	3849.	2577.	1857.	64.	14211.
85+	0.	255.	63.	454.	558.	639.	741.	765.	131.	3718.
TOTAL	894200.	675567.	445743.	240044.	122494.	45239.	13176.	3358.	255.	8473903.

NUMBER OF CHILDREN
 INTACT HOUSEHOLDS
 MALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF WIFE -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	5283.	255854.	1011634.	628914.	94187.	2830.		
5-9	0.	0.	0.	79.	12848.	301547.	944874.	529678.	140277.		
10-14	0.	0.	0.	127.	830.	12301.	299591.	750750.	428137.		
15-19	0.	0.	0.	0.	1135.	3127.	22100.	212444.	505642.		
20-24	0.	0.	0.	0.	980.	1880.	2047.	6221.	87389.		
25-29	0.	0.	0.	0.	417.	1845.	1590.	1134.	5404.		
30-34	0.	0.	0.	0.	130.	417.	501.	402.	423.		
35-39	0.	0.	0.	0.	0.	77.	93.	270.	102.		
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.		
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.		
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.		
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.		
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.		
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.		
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.		
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.		
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.		
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.		
TOTAL	0.	0.	0.	5489.	272220.	1334946.	1949716.	1595218.	1170277.		

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	555.	207.	222.	245.	82.	54.	0.	0.	0.	2002061.
5-9	4184.	1268.	273.	95.	66.	18.	0.	0.	0.	1985221.
10-14	103733.	56690.	12924.	1072.	545.	164.	81.	0.	0.	1731946.
15-19	435875.	196053.	72095.	14071.	1759.	598.	139.	0.	0.	1463035.
20-24	270132.	244908.	103215.	37471.	7313.	781.	194.	0.	0.	760531.
25-29	82243.	203724.	123195.	54480.	17309.	2379.	228.	0.	0.	493993.
30-34	4775.	49880.	59140.	29318.	12529.	3559.	402.	80.	0.	161581.
35-39	264.	1039.	1764.	12117.	4931.	2249.	382.	84.	0.	34504.
40-44	3.	16.	93.	731.	573.	213.	44.	4.	0.	1803.
45-49	238.	64.	187.	1183.	6467.	3233.	1664.	0.	0.	13252.
50-54	0.	110.	0.	61.	712.	3180.	1133.	278.	0.	5531.
55-59	0.	0.	170.	41.	0.	276.	1214.	579.	0.	2286.
60-64	0.	0.	0.	0.	0.	0.	117.	317.	63.	518.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	975000.	743957.	384365.	148904.	52437.	16703.	5599.	1362.	48.	8656259.

1990 KUREA

NUMBER OF CHILDREN
INTACT HOUSEHOLDS
FEMALE MEMBERS

62

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF WIFE - 20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	4757.	245667.	966105.	567016.	81803.	2666.
5-9	0.	0.	0.	83.	12175.	283961.	941588.	481947.	128894.
10-14	0.	0.	0.	122.	675.	17523.	274630.	693875.	394696.
15-19	0.	0.	0.	111.	735.	2331.	19119.	186171.	452495.
20-24	0.	0.	0.	0.	325.	875.	1275.	3940.	74922.
25-29	0.	0.	0.	0.	242.	386.	594.	253.	1287.
30-34	0.	0.	0.	0.	151.	180.	78.	262.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	234.	49.
40-44	0.	0.	0.	0.	0.	3.	1.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	5073.	259964.	1268408.	1804097.	1450483.	1055013.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
45-49	553.	238.	198.	152.	155.	58.	0.	0.	0.	1871364.
50-54	3710.	1169.	117.	172.	224.	83.	21.	0.	0.	1854337.
55-59	155401.	51921.	12497.	1245.	454.	188.	54.	0.	0.	1598780.
60-64	388121.	179876.	66874.	13292.	1574.	330.	90.	0.	0.	1311378.
65-69	269439.	258259.	104777.	42562.	8442.	802.	103.	0.	0.	770405.
70-74	21994.	108022.	76734.	37479.	14406.	2125.	387.	0.	0.	270300.
75-79	453.	16776.	33456.	23198.	10165.	3965.	474.	247.	0.	89288.
80-84	140.	134.	8103.	15374.	13364.	3695.	772.	68.	0.	38738.
85+	3.	2.	31.	259.	505.	240.	83.	4.	4.	140.
45-49	1.	1.	1.	3.	20.	27.	12.	3.	0.	48.
50-54	0.	175.	53.	144.	240.	1146.	1357.	446.	0.	3561.
55-59	0.	0.	165.	0.	0.	53.	756.	486.	0.	1460.
60-64	0.	0.	0.	0.	0.	0.	0.	70.	0.	209.
65-69	0.	0.	0.	0.	0.	0.	0.	144.	0.	144.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	846546.	616273.	308206.	133883.	46261.	21379.	4106.	1467.	73.	7911265.

1990 KUREA

OUTPUT PAGE 109

NUMBER OF CHILDREN

1990 KOREA

NUMBER OF CHILDREN
SINGLE OR ADDED HOUSEHOLDS, FEMALE HEADS
SINGLE MEMBERS

AGE GROUP	3-4	5-9	10-14	15-19	- AGE OF HEADS -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	47.	5371.	27483.	27480.	6246.	258.		
5-9	0.	0.	0.	39.	260.	14177.	59107.	38703.	12490.		
10-14	0.	0.	0.	212.	235.	827.	21359.	65234.	43575.		
15-19	0.	0.	0.	254.	128.	351.	2179.	23189.	57845.		
20-24	0.	0.	0.	0.	45.	159.	84.	834.	13145.		
25-29	0.	0.	0.	0.	0.	140.	60.	35.	658.		
30-34	0.	0.	0.	0.	0.	83.	0.	68.	139.		
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.		
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.		
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.		
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.		
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.		
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.		
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.		
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.		
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.		
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.		
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.		
TOTAL	0.	0.	0.	545.	6308.	43069.	110268.	134569.	128193.		

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	60.	31.	60.	46.	29.	0.	0.	0.	0.	66987.
5-9	524.	206.	88.	57.	169.	21.	22.	0.	0.	125988.
10-14	25078.	12180.	1867.	304.	259.	288.	54.	0.	0.	173511.
15-19	71317.	54392.	26027.	5730.	1284.	893.	192.	345.	50.	244584.
20-24	51785.	10041.	41578.	16574.	4058.	703.	260.	270.	0.	201532.
25-29	14561.	59374.	51246.	26707.	11478.	1176.	297.	153.	0.	167786.
30-34	10674.	11449.	17602.	12496.	5159.	1919.	236.	123.	77.	50982.
35-39	50.	118.	3174.	2773.	2303.	950.	266.	130.	0.	9872.
40-44	0.	7.	8.	157.	147.	113.	23.	13.	0.	473.
45-49	0.	65.	89.	324.	1386.	1620.	972.	194.	76.	4726.
50-54	0.	0.	71.	58.	481.	602.	1043.	213.	154.	2704.
55-59	0.	0.	54.	90.	0.	114.	674.	290.	301.	1483.
60-64	0.	0.	3.	0.	0.	0.	59.	140.	0.	200.
65-69	0.	0.	0.	0.	0.	0.	0.	67.	145.	212.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	104503.	208516.	143857.	69235.	26784.	8352.	4090.	1938.	814.	1051038.

1990 KOREA

OUTPUT PAGE 110

NUMBER OF CHILDREN

1990 KOREA

NUMBER OF CHILDREN
SINGLE HEADED HOUSEHOLDS, FEMALE HEADS
FEMALE MEMBERS

64

AGE GROUP	0-4	5-9	10-14	15-19	- AGE GR HEAD - 20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	4185.	29340.	22435.	5321.	182.
5-9	0.	0.	0.	35.	451.	12042.	49109.	34572.	12007.
10-14	0.	0.	0.	39.	18.	664.	18839.	61731.	40525.
15-19	0.	0.	0.	186.	149.	365.	1128.	21989.	53762.
20-24	0.	0.	0.	113.	177.	211.	73.	764.	10848.
25-29	0.	0.	0.	0.	100.	61.	0.	0.	388.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	375.	5289.	42683.	92086.	124442.	1117714.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	54.	65.	61.	44.	29.	0.	0.	0.	0.	62216.
5-9	447.	225.	92.	28.	27.	54.	45.	37.	0.	109168.
10-14	23345.	12727.	3574.	601.	398.	139.	91.	88.	0.	142849.
15-19	66501.	45932.	23790.	5172.	717.	500.	99.	89.	57.	220657.
20-24	46635.	47526.	42655.	18011.	4660.	171.	210.	163.	0.	195008.
25-29	5067.	28817.	25196.	14844.	6535.	1524.	71.	375.	74.	83051.
30-34	182.	5172.	10702.	8707.	5852.	2065.	764.	165.	0.	33809.
35-39	0.	242.	2500.	3546.	3510.	1750.	743.	111.	0.	12529.
40-44	0.	2.	8.	106.	204.	161.	86.	20.	7.	598.
45-49	0.	1.	0.	1.	5.	14.	11.	5.	2.	39.
50-54	0.	84.	0.	0.	51.	488.	1136.	921.	313.	4774.
55-59	0.	0.	0.	0.	0.	53.	962.	922.	411.	2348.
60-64	0.	0.	0.	0.	0.	0.	269.	220.	0.	489.
65-69	0.	0.	0.	0.	0.	0.	0.	70.	0.	138.
70-74	0.	0.	0.	0.	0.	0.	62.	0.	0.	62.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	144480.	160792.	108779.	51110.	22445.	8167.	5234.	3186.	932.	887715.

1990 KOREA

OUTPUT PAGE 111

NUMBER OF CHILDREN

NUMBER OF CHILDREN
SINGLE HEADED HOUSEHOLDS, MALE HEADS
MALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF HEAD -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	50.	1757.	3893.	1410.	61.		
5-9	0.	0.	0.	0.	126.	422.	3413.	6715.	3097.		
10-14	0.	0.	0.	0.	679.	393.	1025.	4383.	7760.		
15-19	0.	0.	0.	48.	583.	196.	316.	714.	4915.		
20-24	0.	0.	0.	54.	126.	747.	137.	122.	682.		
25-29	0.	0.	0.	0.	107.	222.	0.	72.	108.		
30-34	0.	0.	3.	0.	130.	74.	158.	77.	48.		
35-39	0.	0.	0.	0.	0.	0.	0.	0.	36.		
40-44	0.	0.	0.	1.	0.	3.	0.	0.	0.		
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.		
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.		
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.		
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.		
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.		
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.		
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.		
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.		
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.		
TOTAL	0.	0.	0.	103.	1803.	3819.	9342.	13493.	16707.		

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	26.	39.	62.	39.	27.	26.	2.	0.	0.	7991.
5-9	173.	127.	173.	68.	60.	59.	0.	0.	0.	14831.
10-14	6703.	3208.	2664.	704.	333.	184.	0.	27.	0.	27564.
15-19	12702.	9802.	6963.	3191.	1435.	908.	42.	90.	137.	42040.
20-24	4974.	10005.	8148.	4794.	3630.	1664.	0.	94.	171.	35350.
25-29	862.	7847.	9482.	7288.	4855.	2054.	575.	145.	77.	33695.
30-34	113.	1116.	5131.	4977.	4135.	1862.	908.	109.	0.	19044.
35-39	44.	16.	540.	1084.	1745.	1522.	413.	220.	43.	6463.
40-44	0.	0.	3.	79.	207.	187.	89.	26.	4.	598.
45-49	0.	0.	0.	98.	1321.	2633.	1286.	584.	312.	6239.
50-54	0.	0.	0.	0.	204.	1125.	1377.	887.	317.	3912.
55-59	0.	0.	0.	0.	0.	0.	502.	632.	194.	1333.
60-64	0.	0.	0.	0.	0.	0.	180.	145.	181.	557.
65-69	0.	0.	0.	0.	0.	0.	1.	0.	137.	139.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	25097.	32154.	33158.	23123.	17954.	12228.	5373.	3217.	1580.	199154.

1990 KURFA

NUMBER OF CHILDREN
SINGLE HEADED HOUSEHOLDS, KALE HEADS
FEMALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF HEAD - 20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	95.	1162.	3253.	1458.	73.
5-9	0.	0.	0.	15.	0.	242.	3381.	6021.	3046.
10-14	0.	0.	0.	145.	136.	267.	719.	4240.	6858.
15-19	0.	0.	0.	0.	622.	661.	152.	867.	5285.
20-24	0.	0.	0.	0.	417.	1001.	69.	74.	577.
25-29	0.	0.	0.	0.	93.	462.	266.	197.	20.
30-34	0.	0.	0.	0.	66.	0.	105.	593.	0.
35-39	0.	0.	0.	39.	0.	0.	63.	135.	58.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	93.	0.	0.	131.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	189.	1610.	3889.	8207.	13587.	16047.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	25.	86.	15.	0.	1.	0.	0.	0.	0.	6167.
5-9	150.	132.	113.	94.	64.	0.	0.	0.	0.	13277.
10-14	4915.	3355.	2714.	920.	222.	77.	27.	0.	0.	24043.
15-19	10906.	9526.	7147.	3006.	1909.	655.	39.	97.	0.	40872.
20-24	4688.	13011.	9633.	6272.	3713.	1492.	264.	210.	120.	41562.
25-29	457.	3506.	6401.	5162.	3311.	2351.	649.	187.	73.	24136.
30-34	39.	345.	1878.	3870.	4396.	2494.	529.	482.	0.	14997.
35-39	0.	18.	454.	1562.	3112.	2896.	1216.	556.	67.	10196.
40-44	10.	0.	1.	50.	128.	181.	115.	43.	15.	544.
45-49	0.	1.	0.	0.	8.	13.	11.	6.	4.	44.
50-54	0.	0.	0.	44.	96.	449.	1549.	1084.	267.	3735.
55-59	0.	0.	58.	0.	33.	99.	682.	403.	544.	1929.
60-64	0.	0.	0.	0.	0.	65.	0.	279.	131.	476.
65-69	0.	0.	0.	0.	0.	0.	0.	64.	0.	64.
70-74	0.	0.	0.	0.	0.	0.	56.	58.	0.	115.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	21210.	29700.	27913.	20942.	18022.	10775.	5138.	3497.	1371.	182157.

1990 KURFA

OUTPUT PAGE 113

NUMBER OF CHILDREN

1990 KURFA

 NUMBER OF PARENTS
 INTACT HOUSEHOLDS
 MALL MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF WIFE -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

1990 KURFA

OUTPUT PAGE 114

NUMBER OF PARENTS

1990 KUREA

NUMBER OF PARENTS
INTACT HOUSEHOLDS
FEMALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF WIFE - 20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	13.	17.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	48.	0.	76.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	632.	20360.	42818.	14556.	1015.	192.
60-64	0.	0.	0.	558.	20953.	65433.	56756.	17704.	1190.
65-69	0.	0.	0.	449.	15149.	57012.	74729.	53139.	21853.
70-74	0.	0.	0.	358.	10249.	39115.	59044.	64600.	53083.
75-79	0.	0.	0.	123.	3096.	17437.	42350.	45045.	52427.
80-84	0.	0.	0.	98.	1637.	7181.	14184.	19913.	28541.
85+	0.	0.	0.	49.	1043.	3557.	5461.	8256.	12680.
	0.	0.	0.	43.	623.	2124.	3799.	2342.	3776.
TOTAL	0.	0.	0.	2310.	71884.	234800.	271630.	212044.	173818.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	124.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	258.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	217.	0.	0.	0.	0.	0.	0.	0.	0.	79790.
55-59	52.	65.	0.	57.	0.	0.	0.	0.	0.	142767.
60-64	2081.	184.	62.	0.	0.	0.	0.	0.	0.	224699.
65-69	22421.	1990.	127.	0.	0.	0.	0.	0.	0.	250997.
70-74	38486.	14904.	1273.	0.	0.	0.	0.	0.	0.	216320.
75-79	34950.	25205.	8281.	663.	0.	0.	0.	0.	0.	140919.
80-84	17074.	20045.	11279.	3470.	409.	63.	0.	0.	0.	83890.
85+	6570.	8110.	6807.	2521.	1578.	372.	49.	0.	0.	38739.
TOTAL	122355.	70515.	27832.	6774.	1987.	499.	69.	0.	0.	1198507.

1990 KUREA

OUTPUT PAGE 115

NUMBER OF PARENTS

1990 KUREA

NUMBER OF PARENTS
SINGLE HEAD OF HOUSEHOLD, FEMALE HEADS
MALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF HEAD -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.		0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.		0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.		0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	0.		0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.		0.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.		0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.		48.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.		0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.		0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.		0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.		0.	0.	0.	0.	39.	0.
55-59	0.	0.	0.	0.		0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	71.	154.	259.	80.	55.	35.	0.	0.
65-69	0.	0.	0.	0.	41.	134.	105.	103.	25.	0.	0.
70-74	0.	0.	0.	0.	58.	81.	503.	138.	285.	0.	0.
75-79	0.	0.	0.	0.	40.	141.	85.	167.	310.	0.	0.
80-84	0.	0.	0.	0.	0.	57.	247.	127.	344.	0.	0.
85+	0.	0.	0.	0.	0.	72.	79.	124.	208.	0.	0.
TOTAL	0.	0.	0.	117.	350.	688.	1098.	709.	1358.		

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	73.	0.	0.	0.	0.	0.	0.	0.	0.	39.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	73.
60-64	28.	0.	31.	0.	0.	0.	0.	0.	0.	653.
65-69	48.	57.	0.	0.	0.	0.	0.	0.	0.	466.
70-74	262.	271.	47.	0.	0.	0.	0.	0.	0.	1171.
75-79	415.	259.	58.	0.	0.	0.	0.	0.	0.	1260.
80-84	107.	250.	112.	61.	0.	0.	0.	0.	0.	1505.
85+	248.	189.	61.	0.	0.	0.	0.	0.	0.	1053.
TOTAL	1180.	1016.	308.	61.	0.	0.	0.	0.	0.	6893.

1990 KUREA

OUTPUT PAGE 116

NUMBER OF PARENTS

1990 KUREA

NUMBER OF PARENTS
SINGLE HEADED HOUSEHOLDS, FEMALE HEADS
FEMALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF HEAD -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	135.	1102.	1305.	714.	15.	0.	0.	0.
60-64	0.	0.	0.	210.	582.	1143.	2492.	1203.	59.	0.	0.
65-69	0.	0.	0.	149.	481.	1491.	3691.	3363.	1693.	0.	0.
70-74	0.	0.	0.	0.	132.	1156.	2780.	3686.	4553.	0.	0.
75-79	0.	0.	0.	0.	163.	205.	1242.	2834.	3925.	0.	0.
80-84	0.	0.	0.	0.	0.	464.	846.	671.	1990.	0.	0.
85+	0.	0.	0.	0.	0.	0.	192.	282.	1365.	0.	0.
TOTAL	0.	0.	0.	300.	2456.	5763.	11963.	12309.	14009.	0.	0.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	148.	0.	0.	0.	0.	0.	0.	0.	0.	3136.
65-69	2406.	535.	0.	0.	0.	0.	0.	0.	0.	5613.
70-74	4311.	2412.	333.	0.	0.	0.	0.	0.	0.	11084.
75-79	4128.	3370.	1859.	290.	0.	0.	0.	0.	0.	15202.
80-84	1652.	2519.	2048.	978.	249.	0.	0.	0.	0.	15422.
85+	564.	1712.	2385.	972.	475.	62.	0.	0.	0.	13427.
TOTAL	13009.	10548.	6425.	2240.	723.	62.	0.	0.	65.	9285.

1990 KUREA

OUTPUT PAGE 117

NUMBER OF PARENTS

1990 KOREA

NUMBER OF PARENTS
SINGLE HEADED HOUSEHOLDS, MALE HEADS
MALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	AGE OF HEAD -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	185.	117.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	99.	287.	203.	253.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	293.	1120.	81.	0.	0.	0.	0.
60-64	0.	0.	0.	35.	261.	984.	380.	113.	52.	0.	0.
65-69	0.	0.	0.	118.	493.	660.	410.	352.	280.	0.	0.
70-74	0.	0.	0.	0.	572.	536.	130.	62.	255.	0.	0.
75-79	0.	0.	0.	50.	104.	223.	71.	235.	0.	0.	0.
80-84	0.	0.	0.	43.	215.	0.	72.	63.	0.	0.	0.
85+	0.	0.	0.	52.	160.	74.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	591.	2521.	3801.	1398.	825.	588.	0.	0.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	261.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	832.
60-64	27.	0.	0.	0.	0.	0.	0.	0.	0.	1494.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	1852.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	2319.
75-79	482.	0.	46.	0.	0.	0.	0.	0.	0.	2069.
80-84	166.	0.	48.	0.	0.	0.	0.	0.	0.	1160.
85+	1.	0.	59.	112.	0.	0.	0.	0.	0.	565.
TOTAL	714.	282.	279.	112.	0.	0.	0.	0.	0.	11112.

1990 KOREA

OUTPUT PAGE 118

NUMBER OF PARENTS

NUMBER OF PARENTS
SINGLE HEADED HOUSEHOLDS, MALE HEADS
FEMALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF HEAD -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	75.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	477.	35.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	1607.	13996.	18262.	4915.	142.	0.	0.	0.
55-59	0.	0.	0.	1368.	9301.	71077.	8984.	2894.	171.	0.	0.
60-64	0.	0.	0.	1030.	5335.	12465.	6402.	4328.	7858.	0.	0.
65-69	0.	0.	0.	947.	2466.	7327.	5408.	2915.	3627.	0.	0.
70-74	0.	0.	0.	0.	992.	2061.	2469.	2142.	2078.	0.	0.
75-79	0.	0.	0.	0.	0.	999.	824.	163.	955.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	325.	241.	465.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	53.	56.	0.	0.
TOTAL	0.	0.	0.	5505.	2914.	62194.	29126.	13478.	10210.	0.	0.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	247.	0.	0.	0.	0.	0.	0.	0.	0.	35922.
65-69	3004.	502.	0.	0.	0.	0.	0.	0.	0.	43794.
70-74	2555.	7749.	233.	0.	0.	0.	0.	0.	0.	32668.
75-79	1270.	2273.	1525.	49.	0.	0.	0.	0.	0.	26195.
80-84	434.	648.	979.	844.	279.	0.	0.	0.	0.	14779.
85+	212.	158.	451.	289.	788.	215.	0.	0.	0.	4459.
TOTAL	7742.	5881.	3188.	1232.	1068.	215.	0.	0.	0.	168762.

NUMBER OF GRANDCHILDREN
IN CONTACT WITH HOUSEHOLDS
MALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF WIFE - 20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	396.	204.	1617.
5-9	0.	0.	0.	0.	0.	0.	183.	337.	237.
10-14	0.	0.	0.	0.	0.	0.	48.	465.	126.
15-19	0.	0.	0.	0.	0.	0.	6.	1.	251.
20-24	0.	0.	0.	0.	0.	0.	4.	12.	0.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	0.	0.	0.	637.	1018.	2232.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	15408.	50151.	44017.	24252.	10318.	3077.	605.	316.	0.	151160.
5-9	1543.	14295.	20834.	21409.	10125.	3834.	545.	286.	0.	79828.
10-14	515.	1665.	8982.	16544.	10816.	3610.	823.	195.	0.	43825.
15-19	309.	612.	1426.	3650.	2831.	1207.	548.	217.	0.	11139.
20-24	137.	201.	296.	182.	238.	554.	707.	212.	24.	2592.
25-29	0.	215.	0.	153.	46.	307.	394.	327.	79.	1518.
30-34	176.	0.	0.	46.	29.	158.	360.	275.	0.	996.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	33.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	14614.	66962.	81770.	66542.	34623.	12756.	3982.	1848.	102.	291089.

1990 KOREA

NUMBER OF GRANDCHILDREN
INTACT HOUSEHOLDS
FEMALE MEMBERS

74

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF WIFE -		30-34	35-39	40-44
					20-24	25-29			
0-4	0.	0.	0.	0.	0.	0.	165.	250.	1452.
5-9	0.	0.	0.	0.	0.	0.	244.	345.	150.
10-14	0.	0.	0.	0.	0.	0.	75.	296.	336.
15-19	0.	0.	0.	0.	0.	0.	13.	89.	178.
20-24	0.	0.	0.	0.	0.	0.	4.	0.	84.
25-29	0.	0.	0.	0.	0.	0.	8.	0.	59.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	0.	0.	0.	508.	988.	2259.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	13440.	42048.	35800.	22612.	4305.	2605.	320.	117.	0.	128591.
5-9	13440.	12112.	21213.	17857.	6162.	3320.	482.	75.	0.	65308.
10-14	109.	2390.	10334.	16868.	9224.	3400.	773.	106.	6.	44117.
15-19	296.	501.	1678.	1016.	2326.	1128.	626.	444.	8.	10302.
20-24	98.	534.	194.	224.	139.	448.	449.	339.	0.	2517.
25-29	44.	69.	52.	26.	34.	234.	373.	268.	0.	1168.
30-34	0.	0.	0.	111.	0.	41.	41.	70.	0.	263.
35-39	0.	0.	0.	0.	0.	0.	53.	0.	0.	53.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	16033.	57628.	69272.	60715.	29192.	11176.	3116.	1419.	14.	252320.

1990 KOREA

OUTPUT PAGE 121

NUMBER OF GRANDCHILDREN

1990 KUREA

NUMBER OF GRANDCHILDREN
SINGLE HEADED HOUSEHOLDS, FEMALE HEADS
MALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF HEAD -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	73.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	54.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	45.	0.	0.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	18.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	0.	0.	0.	0.	0.	45.	144.	

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	2757.	9492.	10166.	7438.	4475.	1377.	351.	208.	187.	36754.
5-9	357.	1644.	8642.	6917.	5885.	2020.	892.	213.	0.	28513.
10-14	50.	573.	4659.	7761.	7007.	2006.	1094.	288.	56.	24567.
15-19	41.	52.	707.	2122.	2715.	1785.	1116.	509.	73.	9119.
20-24	40.	57.	98.	191.	273.	675.	1036.	695.	82.	3222.
25-29	47.	0.	0.	27.	243.	101.	1120.	687.	140.	2964.
30-34	0.	72.	0.	0.	0.	142.	227.	283.	81.	804.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	3300.	13778.	24472.	24376.	20748.	9710.	5867.	2884.	620.	105943.

1990 KUREA

OUTPUT PAGE 122

NUMBER OF GRANDCHILDREN

1990 KURFA

NUMBER OF GRANDCHILDREN
SINGLE HEADED HOUSEHOLDS - FEMALE HEADS
FEMALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF HEAD -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	207.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	12.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	58.	13.	0.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	0.	0.	0.	0.	0.	58.	233.	

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	2404.	8901.	9684.	5927.	3657.	1234.	321.	335.	37.	32607.
5-9	2694.	2180.	6533.	6602.	4094.	1815.	516.	203.	10.	21701.
10-14	44.	1132.	3655.	5874.	5328.	2458.	833.	192.	9.	19598.
15-19	0.	175.	844.	1568.	1877.	1122.	1130.	377.	102.	7196.
20-24	0.	77.	46.	67.	451.	667.	1548.	197.	173.	3426.
25-29	0.	0.	97.	33.	106.	287.	274.	136.	133.	1071.
30-34	0.	0.	0.	0.	90.	0.	297.	81.	72.	539.
35-39	0.	15.	28.	0.	0.	0.	0.	0.	0.	43.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	2757.	12387.	20838.	19533.	14602.	7583.	4423.	1721.	537.	86180.

1990 KURFA

OUTPUT PAGE 123

NUMBER OF GRANDCHILDREN

1990 KOREA

NUMBER OF GRANDCHILDREN
SINGLE HEADED HOUSEHOLDS, MALE HEADS
MALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF HEAD -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	0.	0.	76.	35.	53.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	22.	78.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	124.
15-19	0.	0.	0.	0.	0.	0.	0.	35.	56.	50.	0.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	25.	89.	0.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	65.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	0.	0.	0.	0.	109.	194.	403.	0.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	242.	1425.	3480.	4156.	3876.	1828.	727.	274.	182.	16353.
5-9	14.	311.	1581.	3184.	3151.	3118.	789.	557.	17.	12824.
10-14	20.	65.	618.	1360.	2526.	2714.	1116.	650.	48.	9247.
15-19	12.	31.	37.	310.	715.	697.	640.	488.	193.	3253.
20-24	0.	0.	36.	28.	64.	177.	922.	441.	356.	2139.
25-29	0.	0.	0.	0.	44.	84.	637.	511.	169.	1444.
30-34	0.	0.	0.	0.	0.	0.	127.	197.	209.	598.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	10.	0.	0.	0.	10.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	293.	1832.	5753.	9037.	10376.	8617.	4955.	3117.	1175.	45862.

1990 KOREA

OUTPUT PAGE 124

NUMBER OF GRANDCHILDREN

1990 KIRKE

NUMBER OF GRANDCHILDREN
SINGLE HEADED HOUSEHOLDS, MALE THE AGES
FEMALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF HEAD -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	0.	0.	38.	32.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	77.	33.	18.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	53.	109.	40.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	44.	0.	0.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	0.	0.	0.	0.	212.	174.	58.	

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	319.	1554.	3672.	3095.	3097.	1736.	993.	339.	83.	14958.
5-9	0.	138.	1419.	1924.	3102.	2090.	504.	330.	28.	9622.
10-14	0.	73.	205.	1279.	2289.	2409.	954.	602.	92.	8112.
15-19	0.	0.	45.	281.	592.	540.	704.	445.	55.	2711.
20-24	7.	0.	38.	36.	56.	193.	596.	268.	129.	1321.
25-29	0.	25.	0.	0.	0.	26.	651.	181.	295.	1178.
30-34	0.	0.	0.	0.	0.	49.	0.	0.	0.	49.
35-39	0.	0.	0.	0.	0.	0.	43.	0.	0.	77.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	338.	1789.	5378.	6014.	9135.	7038.	4445.	2218.	683.	38083.

1990 KIRKE

OUTPUT PAGE 125

NUMBER OF GRANDCHILDREN

1990 KUREA

 NUMBER OF OTHERS
 TOTAL HOUSEHOLDS
 MALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF WIFE -		30-34	35-39	40-44
					20-24	25-29			
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	152.	1963.	3190.	1928.	978.	890.
15-19	0.	0.	0.	1508.	28924.	64126.	44960.	25307.	15965.
20-24	0.	0.	0.	1351.	28476.	76556.	59052.	28448.	16848.
25-29	0.	0.	0.	627.	17472.	82714.	80881.	44177.	25143.
30-34	0.	0.	0.	0.	2603.	20186.	33188.	20830.	14132.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	1934.	82452.	262134.	241157.	116583.	96345.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	102.	639.	457.	215.	0.	0.	0.	0.	0.	1.
15-19	11935.	6833.	3814.	2237.	1428.	649.	393.	0.	0.	11337.
20-24	11113.	7841.	2834.	1927.	560.	485.	68.	0.	0.	208138.
25-29	14504.	9794.	5051.	2730.	3541.	202.	0.	0.	0.	236627.
30-34	9714.	3649.	3078.	858.	1041.	211.	0.	0.	0.	284941.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	109690.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	6936.	5091.	2786.	1272.	641.	0.	0.	0.	0.	0.
50-54	19916.	1511.	5390.	3944.	2821.	3054.	0.	0.	0.	40879.
55-59	5584.	3511.	2611.	1534.	745.	0.	0.	0.	0.	95285.
60-64	0.	0.	0.	0.	0.	0.	388.	0.	0.	27679.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	22.	25.	22.	0.	1.	22.	0.	0.	0.	0.
85+	43.	0.	0.	0.	0.	0.	0.	0.	0.	115.
TOTAL	8602.	55605.	26073.	14717.	8788.	4635.	848.	53.	0.	1014966.

1990 KUREA

OUTPUT PAGE 126

NUMBER OF OTHERS

1990 KURIA

NUMBER OF OTHERS
INTACT HOUSEHOLDS
FEMALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF WIFE -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	212.	1926.	3394.	2422.	1206.	1251.		
15-19	0.	0.	0.	556.	21398.	54163.	41603.	25141.	13667.		
20-24	0.	0.	0.	312.	13726.	45625.	39513.	22105.	13233.		
25-29	0.	0.	0.	19.	1168.	5125.	6035.	3850.	1959.		
30-34	0.	0.	0.	0.	3303.	11220.	18207.	17062.	9651.		
35-39	0.	0.	0.	0.	1722.	3228.	5407.	5438.	4638.		
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.		
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.		
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.		
55-59	0.	0.	0.	0.	14.	112.	79.	82.	76.		
60-64	0.	0.	0.	0.	46.	1134.	895.	977.	795.		
65-69	0.	0.	0.	0.	295.	887.	1023.	807.	628.		
70-74	0.	0.	0.	0.	308.	520.	1426.	1544.	1339.		
75-79	0.	0.	0.	0.	0.	217.	1492.	307.	156.		
80-84	0.	0.	0.	0.	200.	547.	225.	395.	721.		
85+	0.	0.	0.	0.	232.	755.	568.	208.	436.		
TOTAL	0.	0.	0.	1047.	44360.	127024.	119394.	79121.	48551.		

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	1072.	721.	592.	482.	251.	53.	0.	0.	0.	13579.
15-19	11104.	7582.	5823.	2894.	782.	680.	119.	217.	0.	185430.
20-24	8831.	6666.	2179.	1412.	682.	523.	43.	0.	0.	154875.
25-29	1480.	904.	571.	282.	154.	0.	2.	0.	0.	21591.
30-34	794.	5179.	2393.	303.	317.	274.	0.	0.	0.	76104.
35-39	3549.	1769.	1717.	418.	204.	382.	180.	196.	0.	29393.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	116.	53.	49.	17.	11.	5.	0.	0.	678.
60-64	451.	547.	898.	128.	142.	51.	0.	0.	0.	5996.
65-69	876.	446.	117.	206.	127.	127.	0.	0.	0.	5624.
70-74	1726.	504.	524.	117.	128.	265.	0.	0.	0.	8201.
75-79	1531.	426.	752.	380.	151.	0.	0.	0.	0.	5916.
80-84	680.	434.	462.	236.	227.	208.	0.	0.	0.	4935.
85+	0.	0.	6.	530.	0.	0.	0.	0.	0.	2734.
TOTAL	39280.	28445.	15945.	7457.	3292.	2374.	372.	434.	0.	515656.

1990 KURIA

OUTPUT PAGE 127

NUMBER OF OTHERS

1990 KURFA

NUMBER OF OTHERS
SINGLE HEADED HOUSEHOLDS, FEMALE HEADS
MALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE (IF HEAD) -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	1136.	1136.	372.	61.	117.	134.	134.	134.
15-19	0.	0.	0.	5839.	21527.	4995.	3248.	2456.	2720.	2720.	2720.
20-24	0.	0.	0.	160.	4674.	545.	3074.	1725.	2152.	2152.	2152.
25-29	0.	0.	0.	84.	1238.	3225.	4483.	4874.	3159.	3159.	3159.
30-34	0.	0.	0.	0.	0.	1748.	1810.	2294.	2812.	2812.	2812.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	580.	764.	764.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	2228.	4205.	4205.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	837.	837.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	7219.	29086.	15254.	12656.	14272.	16785.	16785.	16785.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	183.	268.	179.	182.	49.	37.	12.	0.	0.	409.
15-19	3434.	4510.	2687.	2034.	1336.	501.	526.	0.	0.	55819.
20-24	2713.	3188.	1496.	1517.	952.	495.	124.	59.	0.	27742.
25-29	2676.	3345.	2607.	2145.	1155.	622.	323.	0.	0.	30143.
30-34	1503.	1039.	1729.	1088.	707.	0.	100.	0.	0.	14430.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	2351.	1901.	247.	680.	678.	340.	0.	0.	0.	0.
50-54	6164.	1416.	9588.	1193.	1340.	0.	0.	0.	0.	7632.
55-59	419.	1634.	753.	0.	789.	0.	0.	0.	0.	26627.
60-64	0.	0.	0.	0.	0.	738.	0.	0.	0.	5983.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	16.	0.	0.	0.	0.	0.	0.	0.	0.	16.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	20172.	19986.	19036.	9039.	7106.	2733.	1190.	59.	0.	174490.

1990 KURFA

OUTPUT PAGE 128

NUMBER OF OTHERS

1990 KURFA

NUMBER OF OTHERS
SINGLE HEADED HOUSEHOLDS, FEMALE HEADS
FEMALE MEMBERS

82

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF HEAD -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	1175.	1104.	324.	119.	161.	180.	0.	0.
15-19	0.	0.	0.	6967.	26528.	6323.	3525.	2567.	2516.	2291.	0.
20-24	0.	0.	0.	340.	7734.	8487.	4841.	2682.	2291.	0.	0.
25-29	0.	0.	0.	0.	188.	877.	636.	749.	361.	0.	0.
30-34	0.	0.	0.	240.	914.	1360.	1650.	4185.	3351.	0.	0.
35-39	0.	0.	0.	0.	144.	388.	665.	1658.	1054.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	39.	0.	16.	0.	0.	21.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	58.	147.	43.	0.	0.
70-74	0.	0.	0.	0.	0.	208.	0.	64.	108.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	120.	104.	0.	0.
80-84	0.	0.	0.	0.	0.	152.	404.	164.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	8764.	36615.	18135.	11909.	12503.	10029.	0.	0.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	333.	377.	376.	314.	57.	30.	74.	0.	27.	4492.
15-19	2610.	2152.	1755.	1432.	1211.	442.	589.	311.	60.	58907.
20-24	2682.	1897.	1700.	767.	997.	343.	89.	41.	0.	34289.
25-29	874.	468.	238.	115.	91.	27.	22.	0.	0.	4185.
30-34	1674.	1242.	1787.	345.	248.	903.	0.	0.	0.	21857.
35-39	1453.	1318.	0.	430.	429.	0.	414.	0.	0.	7955.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	12.	36.	0.	29.	0.	11.	5.	0.	0.	0.
60-64	1.	272.	51.	257.	62.	94.	1.	58.	0.	162.
65-69	59.	233.	415.	428.	0.	73.	65.	0.	0.	1083.
70-74	201.	0.	0.	678.	0.	127.	0.	0.	0.	1833.
75-79	142.	354.	179.	192.	0.	0.	0.	149.	0.	1350.
80-84	180.	0.	471.	0.	0.	0.	0.	244.	0.	1760.
85+	0.	0.	0.	0.	0.	0.	0.	249.	0.	897.
TOTAL	11132.	10352.	6974.	4988.	3036.	2065.	1259.	1072.	208.	139041.

1990 KURFA

OUTPUT PAGE 129

NUMBER OF OTHERS

1990 KUREA

NUMBER OF OTHERS
SINGLE HEADED HOUSEHOLDS, MALE HEADS
MALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF HEAD -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	1170.	1404.	1403.	282.	75.	42.	0.	0.
15-19	0.	0.	0.	3526.	25469.	25488.	4597.	638.	507.	0.	0.
20-24	0.	0.	0.	880.	10445.	24571.	8739.	1738.	661.	0.	0.
25-29	0.	0.	0.	140.	1657.	17445.	12405.	3130.	1317.	0.	0.
30-34	0.	0.	0.	224.	844.	1853.	2555.	1820.	2229.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	214.	0.	0.	0.	278.	0.	0.
50-54	0.	0.	0.	1840.	0.	0.	0.	1115.	0.	0.	0.
55-59	0.	0.	0.	294.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	39.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	13144.	40648.	71209.	26618.	8714.	4985.	0.	0.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	21.	40.	24.	24.	10.	0.	0.	0.	0.	0.
15-19	578.	524.	315.	342.	397.	126.	233.	51.	52.	5164.
20-24	650.	447.	241.	231.	280.	53.	82.	0.	0.	68542.
25-29	1127.	369.	110.	110.	520.	204.	187.	0.	101.	52072.
30-34	147.	1161.	626.	205.	4.	4.	0.	0.	0.	33826.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	11766.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	896.	786.	327.	285.	0.	289.	0.	0.	0.	3027.
50-54	2505.	1707.	0.	1981.	0.	1174.	0.	0.	0.	12330.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	294.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	16.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	16.
TOTAL	5980.	5039.	1644.	5178.	1266.	1870.	483.	113.	176.	187083.

1990 KUREA

OUTPUT PAGE 130

NUMBER OF OTHERS

NUMBER OF OTHERS
SIMPLE HEADED HOUSEHOLDS, HALF HEADS
FEMALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF HEAD -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	1231.	194.	0.	1350.	285.	66.	0.	36.
15-19	0.	0.	0.	6658.	22656.	26759.	4559.	5564.	877.	351.	555.
20-24	0.	0.	0.	3312.	8098.	27718.	1446.	194.	259.	1908.	468.
25-29	0.	0.	0.	168.	853.	1368.	1723.	1955.	192.	0.	0.
30-34	0.	0.	0.	216.	1322.	6352.	2626.	1356.	0.	0.	0.
35-39	0.	0.	0.	0.	287.	998.	110.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	11.	0.	0.	0.	18.	0.
65-69	0.	0.	0.	78.	0.	110.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	76.	76.	0.	0.	101.	0.
75-79	0.	0.	0.	0.	108.	0.	0.	125.	121.	0.	0.
80-84	0.	0.	0.	0.	0.	201.	0.	194.	0.	0.	0.
85+	0.	0.	0.	0.	180.	277.	0.	0.	202.	0.	0.
TOTAL	0.	0.	0.	11663.	35465.	60219.	16189.	5200.	4019.		

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	64.	88.	31.	30.	65.	15.	0.	15.	0.	5239.
15-19	673.	387.	494.	120.	338.	197.	0.	0.	54.	64072.
20-24	474.	242.	127.	310.	179.	205.	0.	38.	0.	43288.
25-29	88.	48.	86.	86.	22.	94.	0.	0.	46.	5188.
30-34	535.	1041.	520.	11.	262.	0.	0.	0.	0.	16747.
35-39	744.	517.	203.	0.	0.	8.	191.	0.	191.	5154.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	13.	5.	15.	5.	0.	0.	0.	0.	0.
60-64	82.	0.	158.	97.	0.	104.	0.	0.	0.	67.
65-69	0.	84.	79.	77.	0.	0.	0.	0.	0.	629.
70-74	0.	0.	143.	0.	0.	119.	0.	0.	0.	492.
75-79	0.	0.	0.	160.	0.	333.	0.	0.	0.	816.
80-84	0.	0.	0.	204.	0.	0.	0.	0.	0.	694.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	578.
TOTAL	2610.	2459.	1808.	1111.	871.	1075.	191.	53.	291.	143223.

1990 KUREA

NUMBER OF OTHERS
PRIMARY INDIVIDUAL HOUSEHOLDS, MALE HEADS
MALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF HEAD -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	1035.	0.	0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	34128.	0.	0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	28564.	0.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	36196.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	14210.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	35163.	28564.	36196.	14210.	0.	0.	0.	0.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	1035.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	34128.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	28564.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	36196.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	14210.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	7969.	0.	0.	0.	0.	0.	0.	0.	0.	7969.
50-54	0.	27345.	0.	0.	0.	0.	0.	0.	0.	27345.
55-59	0.	0.	4685.	0.	0.	0.	0.	0.	0.	4685.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	37.	0.	0.	37.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	7969.	27345.	4685.	0.	0.	0.	37.	0.	0.	154169.

1990 KUREA

OUTPUT PAGE 132

NUMBER OF OTHERS

1990 KUMFA

NUMBER OF OTHERS
PRIMARY INDIVIDUAL HOUSEHOLDS, MALE HEADS
FEMALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF HEAD -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

1990 KUMFA

OUTPUT PAGE 133

NUMBER OF OTHERS

1990 KOREA

NUMBER OF OTHERS
PRIMARY INDIVIDUAL HOUSEHOLDS, FEMALE HEADS
MALE MEMBERS

AGE GROUP	3-4	5-9	10-14	15-19	- AGE OF HEAD -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

1990 KOREA

OUTPUT PAGE 134

NUMBER OF OTHERS

1990 KUREA

NUMBER OF OTHERS
PRIMARY INDIVIDUAL HOUSEHOLDS, FEMALE HEADS
FEMALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF HEAD - 20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	1590.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	32966.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	27388.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	4755.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	27822.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	11026.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	34555.	27388.	4755.	27822.	11026.	0.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	1590.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	32966.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	27388.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	4755.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	27822.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	11026.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	322.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	2618.	0.	0.	0.	0.	0.	322.
65-69	0.	0.	0.	0.	2690.	0.	0.	0.	0.	2618.
70-74	0.	0.	0.	0.	0.	2910.	0.	0.	0.	2690.
75-79	0.	0.	0.	0.	0.	0.	1209.	0.	0.	2910.
80-84	0.	0.	0.	0.	0.	0.	0.	817.	0.	1209.
85+	0.	0.	0.	0.	0.	0.	0.	0.	891.	817.
TOTAL	0.	0.	322.	2618.	2690.	2910.	2027.	0.	891.	117064.

1990 KUREA

OUTPUT PAGE 135

NUMBER OF OTHERS

TOTAL NUMBER OF MEMBERS
INTACT HOUSEHOLDS
MALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF WIFE - 20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	5283.	255854.	1013635.	629309.	94391.	4448.
5-9	0.	0.	0.	79.	12868.	301942.	995060.	530015.	140514.
10-14	0.	0.	0.	279.	2792.	15492.	301567.	752199.	420154.
15-19	0.	0.	0.	2266.	30730.	67434.	67066.	237974.	522072.
20-24	0.	0.	0.	11982.	106045.	85216.	61362.	34846.	104344.
25-29	0.	0.	0.	11452.	411558.	552231.	96955.	45984.	30772.
30-34	0.	0.	0.	2164.	57341.	883817.	527879.	36936.	15058.
35-39	0.	0.	0.	127.	1308.	217129.	78465.	386771.	19046.
40-44	0.	0.	0.	52.	1306.	22528.	231739.	602844.	331438.
45-49	0.	0.	0.	204.	1342.	8906.	32816.	164616.	487313.
50-54	0.	0.	0.	258.	3556.	10117.	15262.	31544.	163887.
55-59	0.	0.	0.	173.	3378.	13716.	8829.	12786.	35465.
60-64	0.	0.	0.	32.	1778.	5706.	6757.	5416.	8620.
65-69	0.	0.	0.	177.	3920.	12495.	14134.	13932.	11576.
70-74	0.	0.	0.	59.	2574.	7749.	11846.	11587.	11360.
75-79	0.	0.	0.	49.	1125.	3901.	5384.	6064.	8592.
80-84	0.	0.	0.	0.	354.	1701.	2630.	2958.	4276.
85+	0.	0.	0.	0.	187.	292.	1128.	857.	1110.
TOTAL	0.	0.	0.	34635.	1010015.	5234604.	3794879.	2971765.	2328939.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	24463.	53358.	44240.	24797.	10400.	2130.	605.	316.	0.	2153221.
5-9	5727.	5564.	27107.	21503.	10391.	3852.	545.	286.	0.	2065048.
10-14	170029.	58094.	22364.	17842.	11511.	3792.	903.	195.	0.	1787108.
15-19	448364.	203788.	77391.	17958.	6078.	2454.	1080.	217.	0.	1684267.
20-24	789612.	243026.	106565.	39580.	8132.	1822.	969.	284.	23.	1093808.
25-29	97022.	213591.	124690.	57360.	18696.	2848.	692.	327.	79.	1278184.
30-34	14917.	53604.	62296.	30243.	13599.	3928.	763.	355.	0.	1802897.
35-39	10804.	1161.	12917.	12183.	5055.	2249.	382.	04.	0.	1455652.
40-44	21794.	837.	410.	785.	730.	213.	96.	4.	4.	1214374.
45-49	289293.	18860.	3490.	2649.	7109.	3233.	1664.	0.	0.	1021513.
50-54	405637.	28206.	16314.	4537.	3679.	6234.	1208.	278.	0.	696587.
55-59	159094.	292390.	153314.	13675.	1175.	413.	1602.	579.	0.	452537.
60-64	35682.	116397.	168871.	89977.	11180.	577.	117.	337.	63.	331332.
65-69	12600.	33997.	78743.	89717.	53033.	6737.	772.	0.	0.	189709.
70-74	9889.	11692.	19587.	37066.	41357.	21968.	2929.	644.	80.	82988.
75-79	7411.	4954.	5526.	7997.	13467.	11310.	6480.	672.	64.	34162.
80-84	559.	3094.	2565.	2401.	2253.	3872.	2577.	1857.	64.	11974.
85+	1863.	1776.	920.	883.	618.	697.	741.	765.	131.	
TOTAL	1990037.	1551914.	931299.	471140.	219458.	79390.	23605.	6421.	425.	18647712.

1990 KURFA

TOTAL NUMBER OF MEMBERS
INTACT HOUSEHOLDS
FEMALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF WIFE - 20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	4757.	245667.	968135.	567130.	85061.	4118.
5-9	0.	0.	0.	83.	12175.	281961.	951632.	482292.	12904.
10-14	0.	0.	0.	332.	2601.	15917.	277127.	495177.	276287.
15-19	0.	0.	0.	25159.	22143.	56493.	60735.	211402.	466340.
20-24	0.	0.	0.	312.	655915.	46504.	43741.	26045.	88239.
25-29	0.	0.	0.	19.	1423.	1549603.	6437.	4103.	3305.
30-34	0.	0.	0.	0.	3854.	11504.	1575578.	17324.	9651.
35-39	0.	0.	0.	0.	1456.	3228.	5954.	1206397.	4764.
40-44	0.	0.	0.	0.	0.	0.	1.	0.	1026274.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	637.	2363.	82610.	14556.	1015.	192.
55-59	0.	0.	0.	584.	2724.	65844.	56835.	1775.	1266.
60-64	0.	0.	0.	447.	10235.	58215.	75624.	54116.	27648.
65-69	0.	0.	0.	356.	10545.	40002.	60071.	67836.	51711.
70-74	0.	0.	0.	123.	4608.	17857.	41776.	46639.	51711.
75-79	0.	0.	0.	98.	1637.	7394.	35876.	20220.	28599.
80-84	0.	0.	0.	49.	1243.	4293.	6186.	8650.	13402.
85+	0.	0.	0.	43.	354.	2474.	4366.	2550.	4212.
TOTAL	0.	0.	0.	32972.	1019168.	3222330.	3752921.	2943352.	2305911.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	18491.	42256.	15599.	22764.	9461.	2663.	320.	117.	0.	1999955.
5-9	5055.	13231.	21531.	18029.	3489.	3403.	502.	75.	0.	1919645.
10-14	15726.	55032.	23423.	18594.	9529.	3642.	827.	106.	0.	1656476.
15-19	39955.	197584.	74375.	19205.	4683.	2145.	835.	61.	0.	1532002.
20-24	27769.	285604.	112149.	44214.	9283.	1833.	595.	319.	0.	1568755.
25-29	27518.	108995.	37157.	37157.	18544.	2959.	784.	268.	0.	1887151.
30-34	855.	21655.	35849.	21612.	13486.	4280.	515.	317.	0.	1723069.
35-39	372.	2103.	9820.	15792.	10274.	4077.	1005.	264.	0.	1269266.
40-44	1.	2.	31.	254.	504.	240.	81.	4.	0.	1027408.
45-49	894700.	1.	1.	1.	23.	27.	12.	3.	0.	894267.
50-54	217.	67574.	54.	144.	240.	1146.	1357.	446.	0.	758917.
55-59	117.	181.	435961.	106.	17.	64.	761.	484.	0.	600649.
60-64	2534.	732.	870.	240172.	167.	51.	0.	70.	0.	470947.
65-69	23290.	2647.	244.	206.	122106.	127.	0.	144.	0.	374559.
70-74	43514.	15409.	1797.	191.	124.	45503.	0.	0.	0.	269765.
75-79	10481.	26191.	9035.	1043.	151.	64.	13176.	0.	0.	160011.
80-84	12753.	20970.	11741.	3706.	036.	272.	0.	3358.	0.	92183.
85+	6570.	8116.	6813.	3050.	1578.	372.	69.	0.	255.	4728.
TOTAL	1917552.	1466016.	857049.	444873.	203226.	72867.	20841.	6671.	372.	1925116.

1990 KURFA

OUTPUT PAGE 137

TOTAL NUMBER OF MEMBERS

TOTAL NUMBER OF MEMBERS
SINGLE HEADED HOUSEHOLDS, FEMALE HEADS
MALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF HEAD -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	42.	5371.	27383.	27460.	6246.	331.		
5-9	0.	0.	0.	38.	266.	1127.	59167.	38763.	12550.		
10-14	0.	0.	0.	134.	1271.	1197.	21400.	65396.	43709.		
15-19	0.	0.	0.	6093.	21850.	5346.	3428.	25882.	60566.		
20-24	0.	0.	0.	160.	474.	5574.	3118.	2559.	15315.		
25-29	0.	0.	0.	94.	1234.	3365.	4543.	4909.	3818.		
30-34	0.	0.	0.	0.	111.	1331.	1810.	2362.	2951.		
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.		
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.		
45-49	0.	0.	0.	0.	0.	0.	0.	580.	804.		
50-54	0.	0.	0.	0.	0.	0.	0.	2226.	4277.		
55-59	0.	0.	0.	71.	463.	259.	80.	54.	872.		
60-64	0.	0.	0.	0.	41.	134.	105.	103.	25.		
65-69	0.	0.	0.	0.	57.	81.	503.	148.	285.		
70-74	0.	0.	0.	46.	0.	141.	85.	162.	316.		
75-79	0.	0.	0.	0.	55.	0.	247.	127.	344.		
80-84	0.	0.	0.	0.	0.	72.	79.	124.	208.		
85+	0.	0.	0.	0.	0.	0.	0.	0.	106.		
TOTAL	0.	0.	0.	7880.	35750.	59011.	124022.	149594.	146480.		

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	2817.	4824.	10426.	7484.	4604.	1377.	381.	206.	187.	101741.
5-9	884.	1880.	8711.	6766.	6054.	2092.	914.	213.	0.	154501.
10-14	25370.	13020.	8700.	6267.	7825.	3311.	1180.	388.	56.	202176.
15-19	78522.	58954.	29410.	9657.	5345.	3179.	1824.	854.	123.	309523.
20-24	54517.	73286.	43171.	23278.	5373.	1877.	1024.	62.	232496.	
25-29	17866.	62686.	51852.	30879.	12826.	2500.	1745.	840.	140.	200894.
30-34	2570.	13060.	14331.	13584.	5667.	2041.	663.	407.	158.	66264.
35-39	50.	314.	3174.	2773.	2403.	450.	268.	140.	0.	9872.
40-44	0.	7.	5.	157.	147.	113.	23.	13.	3.	473.
45-49	2311.	2327.	157.	1003.	2064.	1761.	972.	194.	76.	12398.
50-54	6263.	3702.	9354.	1451.	1870.	602.	1043.	213.	165.	11405.
55-59	919.	1639.	808.	50.	789.	857.	674.	290.	311.	8119.
60-64	28.	0.	31.	0.	0.	0.	54.	140.	0.	666.
65-69	48.	57.	0.	0.	0.	0.	0.	67.	145.	1383.
70-74	262.	271.	47.	0.	0.	0.	0.	0.	0.	1280.
75-79	415.	259.	58.	0.	0.	0.	0.	0.	0.	1435.
80-84	123.	790.	112.	61.	0.	0.	0.	0.	0.	1064.
85+	248.	189.	61.	0.	0.	0.	0.	0.	0.	604.
TOTAL	189155.	263196.	187673.	102710.	56337.	20795.	11147.	4881.	1434.	1338362.

TOTAL NUMBER OF MEMBERS
SINGLE INCLUDED HOUSEHOLDS - FEMALE HEADS
FEMALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF HEAD -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.			8185.	29340.	22935.	5321.	389.
5-9	0.	0.	0.	0.			451.	12042.	45109.	34572.	42019.
10-14	0.	0.	0.	1218.			1141.	988.	18959.	61950.	40718.
15-19	0.	0.	0.	28530.			26877.	6699.	4653.	24556.	56278.
20-24	0.	0.	0.	458.			74451.	6698.	4914.	3447.	13139.
25-29	0.	0.	0.	0.			289.	65828.	636.	749.	0.
30-34	0.	0.	0.	240.			18.	1369.	99311.	4185.	3351.
35-39	0.	0.	0.	0.			144.	384.	686.	118401.	1054.
40-44	0.	0.	0.	0.			0.	0.	0.	0.	128219.
45-49	0.	0.	0.	0.			0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.			1102.	1305.	714.	15.	0.
55-59	0.	0.	0.	139.			586.	1159.	2492.	1708.	79.
60-64	0.	0.	0.	255.			481.	1491.	3749.	3509.	1737.
65-69	0.	0.	0.	149.			132.	1363.	2786.	1750.	4641.
70-74	0.	0.	0.	0.			160.	205.	1242.	2954.	4029.
75-79	0.	0.	0.	0.			0.	616.	1250.	844.	1990.
80-84	0.	0.	0.	0.			0.	0.	192.	282.	1365.
85+	0.	0.	0.	0.			0.	0.	0.	245.	423.
TOTAL	0.	0.	0.	11016.			110913.	131471.	211608.	265484.	270200.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	2458.	8866.	9745.	5972.	3682.	1234.	321.	135.	17.	94823.
5-9	716.	2411.	6625.	6090.	4120.	1849.	560.	240.	10.	130869.
10-14	21812.	14236.	7555.	6790.	5924.	2627.	1008.	280.	36.	187139.
15-19	69111.	48260.	26189.	8173.	3704.	2084.	1818.	776.	219.	306117.
20-24	50717.	69499.	44601.	18845.	6107.	1780.	1846.	601.	173.	299275.
25-29	5481.	29285.	25532.	14993.	6712.	1834.	372.	511.	207.	151197.
30-34	4006.	8414.	12489.	9051.	6191.	2968.	1060.	245.	72.	153857.
35-39	1453.	1575.	2528.	3977.	4459.	1750.	1197.	111.	0.	137203.
40-44	0.	2.	8.	106.	204.	161.	80.	20.	7.	128814.
45-49	161937.	1.	3.	1.	5.	14.	11.	5.	2.	161976.
50-54	0.	186095.	0.	51.	488.	1136.	1783.	921.	313.	193923.
55-59	32.	36.	151055.	29.	0.	93.	967.	922.	411.	159178.
60-64	149.	272.	51.	92904.	62.	94.	270.	279.	3.	105302.
65-69	2265.	767.	415.	478.	57626.	73.	65.	70.	68.	74626.
70-74	4511.	2412.	333.	678.	0.	30399.	62.	0.	121.	47107.
75-79	4270.	3726.	1834.	482.	0.	0.	13471.	164.	0.	28658.
80-84	1872.	2519.	2521.	978.	249.	0.	0.	5808.	0.	15746.
85+	564.	1712.	2385.	972.	475.	62.	0.	249.	1629.	8717.
TOTAL	333345.	380090.	294071.	170517.	99432.	48149.	24898.	44452.	3307.	2388515.

1990 KIRIA

TOTAL NUMBER OF MEMBERS
SINGLE HEADED STOCKHOLDERS - MALE HEADS
MALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	AGE OF HEADS		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	50.	1757.	3968.	1445.	113.		
5-9	0.	0.	0.	0.	168.	422.	3813.	6793.	3119.		
10-14	0.	0.	0.	1178.	2663.	1796.	1307.	4458.	7926.		
15-19	0.	0.	0.	17497.	26051.	26198.	4985.	1608.	5473.		
20-24	0.	0.	0.	940.	9050.	9265.	6876.	1885.	1433.		
25-29	0.	0.	0.	486.	1765.	12749.	12405.	3201.	1425.		
30-34	0.	0.	0.	224.	474.	1932.	43629.	1896.	2342.		
35-39	0.	0.	0.	0.	0.	0.	0.	23152.	36.		
40-44	0.	0.	0.	1.	0.	4.	0.	0.	25726.		
45-49	0.	0.	0.	144.	333.	0.	0.	0.	226.		
50-54	0.	0.	0.	1945.	287.	203.	263.	1115.	0.		
55-59	0.	0.	0.	294.	293.	1129.	81.	0.	0.		
60-64	0.	0.	0.	35.	261.	984.	380.	113.	52.		
65-69	0.	0.	0.	119.	493.	660.	416.	552.	280.		
70-74	0.	0.	0.	0.	572.	536.	136.	62.	255.		
75-79	0.	0.	0.	40.	104.	223.	71.	235.	0.		
80-84	0.	0.	0.	43.	215.	0.	72.	63.	0.		
85+	0.	0.	0.	91.	100.	74.	0.	0.	0.		
TOTAL	0.	0.	0.	43051.	124718.	153353.	78342.	46579.	48409.		

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	268.	1464.	3542.	4195.	3904.	1894.	727.	274.	182.	23764.
5-9	192.	438.	1752.	1250.	3212.	3177.	783.	557.	17.	27654.
10-14	6255.	3314.	3308.	2088.	2908.	2907.	1117.	677.	71.	41969.
15-19	13292.	10357.	7111.	1842.	2547.	1774.	914.	628.	384.	143048.
20-24	5630.	10452.	8425.	5053.	3973.	1896.	988.	497.	527.	169288.
25-29	1909.	8716.	9592.	7394.	5414.	2382.	1400.	656.	145.	193490.
30-34	313.	2777.	5756.	5182.	4143.	1566.	1036.	506.	209.	72284.
35-39	44.	16.	540.	1684.	1745.	1522.	413.	220.	43.	29815.
40-44	0.	0.	0.	79.	207.	187.	89.	28.	4.	26325.
45-49	10769.	760.	327.	383.	3321.	2931.	1260.	589.	312.	39409.
50-54	2505.	36533.	0.	1981.	206.	2309.	1377.	887.	317.	51409.
55-59	0.	0.	32835.	0.	3.	0.	502.	199.	33556.	
60-64	27.	0.	0.	25655.	0.	0.	180.	195.	151.	28064.
65-69	0.	0.	0.	0.	23925.	0.	1.	0.	137.	26382.
70-74	462.	0.	46.	0.	0.	17128.	0.	0.	0.	19197.
75-79	166.	214.	48.	0.	0.	0.	7749.	0.	0.	8958.
80-84	1.	0.	59.	112.	10.	0.	0.	5118.	0.	5954.
85+	59.	68.	127.	0.	0.	0.	0.	0.	2300.	2899.
TOTAL	61957.	74139.	73670.	63105.	53521.	39842.	18609.	11825.	5230.	916348.

1990 KIRIA

OUTPUT PAGE 140

TOTAL NUMBER OF MEMBERS

1990 KOREA

TOTAL NUMBER OF MEMBERS
SINGLE HEADED HOUSEHOLDS, MALE HEADS
FEMALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF HEAD -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	95.	1162.	3291.	1490.	73.		
5-9	0.	0.	0.	0.	0.	262.	3458.	6354.	3064.		
10-14	0.	0.	0.	1145.	2299.	1617.	1057.	4415.	6935.		
15-19	0.	0.	0.	6656.	2328.	27419.	4755.	1744.	5636.		
20-24	0.	0.	0.	3312.	8514.	1720.	3632.	1520.	1132.		
25-29	0.	0.	0.	168.	246.	1429.	1989.	541.	219.		
30-34	0.	0.	0.	291.	1387.	6352.	2930.	2550.	1908.		
35-39	0.	0.	0.	515.	122.	498.	1419.	127.	526.		
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.		
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.		
50-54	0.	0.	0.	1607.	10946.	18356.	4915.	142.	191.		
55-59	0.	0.	0.	1368.	9371.	21088.	5984.	2894.	188.		
60-64	0.	0.	0.	1138.	5335.	12579.	6402.	4328.	2858.		
65-69	0.	0.	0.	947.	2466.	7402.	5483.	2915.	3720.		
70-74	0.	0.	0.	0.	1100.	2061.	2469.	2268.	2199.		
75-79	0.	0.	0.	0.	0.	1199.	674.	763.	955.		
80-84	0.	0.	0.	0.	180.	0.	125.	435.	485.		
85+	0.	0.	0.	0.	0.	277.	0.	53.	258.		
TOTAL	0.	0.	0.	17357.	66719.	126302.	53734.	37439.	10344.		

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	344.	1640.	3687.	3345.	3297.	1736.	491.	339.	83.	21126.
5-9	150.	270.	1532.	2918.	4166.	2090.	504.	330.	28.	22899.
10-14	5006.	3215.	2450.	2213.	2576.	2902.	981.	644.	122.	37394.
15-19	11515.	9912.	7686.	3437.	2849.	1392.	742.	542.	109.	107654.
20-24	5164.	13273.	2746.	6618.	3448.	1491.	860.	516.	249.	86152.
25-29	545.	1619.	6448.	5248.	4333.	2474.	1300.	168.	414.	30502.
30-34	574.	1396.	2198.	3881.	4657.	2543.	528.	482.	0.	31864.
35-39	744.	535.	657.	1562.	3132.	2938.	1450.	556.	257.	15939.
40-44	10.	0.	1.	50.	124.	181.	115.	43.	15.	444.
45-49	0.	1.	0.	0.	0.	13.	11.	6.	4.	44.
50-54	0.	0.	0.	44.	46.	449.	1549.	1084.	287.	39657.
55-59	0.	14.	63.	15.	48.	49.	682.	454.	644.	45846.
60-64	129.	7.	158.	37.	0.	164.	0.	279.	131.	33772.
65-69	1004.	580.	19.	17.	0.	0.	0.	64.	0.	26751.
70-74	2555.	2449.	376.	0.	0.	119.	56.	98.	0.	15510.
75-79	1270.	2273.	1525.	209.	0.	333.	0.	0.	0.	9153.
80-84	434.	648.	479.	1098.	279.	0.	0.	0.	0.	4894.
85+	282.	158.	451.	289.	186.	214.	0.	0.	0.	2720.
TOTAL	11400.	39830.	38288.	29439.	29096.	19104.	9773.	5769.	2144.	532425.

1990 KOREA

OUTPUT PAGE 141

TOTAL NUMBER OF MEMBERS

1990 KOREA

TOTAL NUMBER OF MEMBERS
PRIMARY INDIVIDUAL HOUSEHOLDS, MALE HEADS
MALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF HEAD - 20-24		25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	1035.	0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	56588.	0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	47381.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	49555.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	16849.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	1519.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	951.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	57022.	47381.	49555.	16849.	1519.	951.	

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	1035.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	56588.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	47381.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	49555.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	16849.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	1519.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	951.
45-49	49555.	0.	0.	0.	0.	0.	0.	0.	0.	49555.
50-54	0.	28163.	0.	0.	0.	0.	0.	0.	0.	28163.
55-59	0.	0.	5145.	0.	0.	0.	0.	0.	0.	5145.
60-64	0.	0.	0.	151.	0.	0.	0.	0.	0.	151.
65-69	0.	0.	0.	0.	195.	0.	0.	0.	0.	195.
70-74	0.	0.	0.	0.	0.	236.	0.	0.	0.	236.
75-79	0.	0.	0.	0.	0.	0.	94.	0.	0.	94.
80-84	0.	0.	0.	0.	0.	0.	37.	17.	0.	54.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	8920.	28163.	5145.	151.	195.	236.	131.	17.	0.	21720.

1990 KOREA

OUTPUT PAGE 142

TOTAL NUMBER OF MEMBERS

1990 KUREA

TOTAL NUMBER OF MEMBERS
PRIMARY INDIVIDUAL HOUSEHOLDS, MALE HEADS
FEMALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF HEAD -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

1990 KUREA

OUTPUT PAGE 143

TOTAL NUMBER OF MEMBERS

1990 KOREA

TOTAL NUMBER OF MEMBERS
PRIMARY INDIVIDUAL HOUSEHOLDS, FEMALE HEADS
MALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	Age of HEAD		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

1990 KOREA

OUTPUT PAGE 144

TOTAL NUMBER OF MEMBERS

1990 KURFA

TOTAL NUMBER OF MEMBERS
PRIMARY INDIVIDUAL HOUSEHOLDS, FEMALE HEADS
FEMALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	1590.	0.	0.	0.	0.
15-19	0.	0.	0.	54348.	0.	0.	0.	0.	0.
20-24	0.	0.	0.	0.	51594.	0.	0.	0.	0.
25-29	0.	0.	0.	0.	0.	12329.	0.	0.	0.
30-34	0.	0.	0.	0.	0.	0.	31482.	0.	0.
35-39	0.	0.	0.	0.	0.	0.	0.	13209.	0.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	1513.
45-49	0.	0.	0.	0.	0.	0.	0.	0.	0.
50-54	0.	0.	0.	0.	0.	0.	0.	0.	0.
55-59	0.	0.	0.	0.	0.	0.	0.	0.	0.
60-64	0.	0.	0.	0.	0.	0.	0.	0.	0.
65-69	0.	0.	0.	0.	0.	0.	0.	0.	0.
70-74	0.	0.	0.	0.	0.	0.	0.	0.	0.
75-79	0.	0.	0.	0.	0.	0.	0.	0.	0.
80-84	0.	0.	0.	0.	0.	0.	0.	0.	0.
85+	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL	0.	0.	0.	55938.	51594.	12329.	31482.	13209.	1513.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
5-9	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	1590.
15-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	54348.
20-24	0.	0.	0.	0.	0.	0.	0.	0.	0.	51594.
25-29	0.	0.	0.	0.	0.	0.	0.	0.	0.	12329.
30-34	0.	0.	0.	0.	0.	0.	0.	0.	0.	31482.
35-39	0.	0.	0.	0.	0.	0.	0.	0.	0.	13209.
40-44	0.	0.	0.	0.	0.	0.	0.	0.	0.	1513.
45-49	1544.	0.	0.	0.	0.	0.	0.	0.	0.	1544.
50-54	0.	1744.	0.	0.	0.	0.	0.	0.	0.	1744.
55-59	0.	0.	2591.	0.	0.	0.	0.	0.	0.	2591.
60-64	0.	0.	0.	4511.	0.	0.	0.	0.	0.	4511.
65-69	0.	0.	0.	0.	4160.	0.	0.	0.	0.	4160.
70-74	0.	0.	0.	0.	0.	3757.	0.	0.	0.	3757.
75-79	0.	0.	0.	0.	0.	0.	1469.	0.	0.	1469.
80-84	0.	0.	0.	0.	0.	0.	0.	117.	0.	117.
85+	0.	0.	0.	0.	0.	0.	0.	0.	1022.	1022.
TOTAL	1544.	1744.	2591.	4511.	4160.	3757.	2286.	117.	1022.	18781.

1990 KURFA

OUTPUT PAGE 145

TOTAL NUMBER OF MEMBERS

TOTAL NUMBER OF MEMBERS
ALL HOUSEHOLDS COMBINED
MALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF WIFE OR HEAD - 20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	5325.	261275.	1042774.	660738.	102082.	4891.
5-9	0.	0.	0.	116.	11261.	316091.	1058040.	575570.	156183.
10-14	0.	0.	0.	3840.	7029.	18484.	324274.	822053.	480789.
15-19	0.	0.	0.	123661.	78638.	98964.	77438.	265427.	588110.
20-24	0.	0.	0.	13082.	284427.	121058.	71356.	39290.	121091.
25-29	0.	0.	0.	11682.	414561.	794951.	113903.	54095.	35915.
30-34	0.	0.	0.	2392.	158426.	887080.	608510.	41194.	20351.
35-39	0.	0.	0.	127.	13308.	217129.	784165.	421368.	19082.
40-44	0.	0.	0.	53.	1306.	72531.	231739.	602844.	366030.
45-49	0.	0.	0.	348.	1675.	8906.	32816.	165197.	488344.
50-54	0.	0.	0.	2204.	3843.	10320.	16504.	34919.	168163.
55-59	0.	0.	0.	538.	4133.	15095.	8990.	12840.	36337.
60-64	0.	0.	0.	87.	2079.	7823.	7241.	5633.	8697.
65-69	0.	0.	0.	295.	3144.	13236.	15053.	14422.	12141.
70-74	0.	0.	0.	105.	1446.	8427.	12069.	11811.	11931.
75-79	0.	0.	0.	147.	1284.	4124.	5702.	6427.	8936.
80-84	0.	0.	0.	43.	569.	1774.	2781.	3145.	4484.
85+	0.	0.	0.	91.	367.	374.	1128.	857.	1216.
TOTAL	0.	0.	0.	164115.	1253795.	3589131.	4032434.	3179180.	2532685.

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	19548.	61246.	58207.	36476.	18908.	6362.	1713.	799.	369.	2280704.
5-9	8800.	19841.	37590.	31621.	19657.	9121.	2242.	1056.	17.	2247202.
10-14	201593.	75332.	34377.	28197.	21824.	10030.	3180.	1460.	128.	2032285.
15-19	536508.	273099.	114119.	31657.	13959.	7354.	3818.	1699.	507.	2214951.
20-24	349774.	326764.	158161.	64911.	17478.	5595.	3376.	1906.	632.	1578903.
25-29	116495.	284475.	192125.	95636.	36941.	7731.	3836.	1823.	565.	2164730.
30-34	17777.	68942.	87383.	49009.	23605.	7856.	2461.	1268.	367.	1976635.
35-39	11179.	1495.	16630.	16841.	9103.	4622.	1064.	435.	43.	1506582.
40-44	21794.	444.	418.	1021.	1083.	514.	207.	45.	4.	1250030.
45-49	140044.	21692.	4203.	4035.	10493.	8125.	3921.	784.	388.	1090969.
50-54	414405.	307943.	25673.	9969.	5755.	9145.	3628.	1378.	482.	1014352.
55-59	160013.	294037.	199411.	13715.	1964.	1266.	2777.	1500.	500.	751116.
60-64	35743.	116397.	168902.	122786.	11180.	597.	357.	673.	245.	488421.
65-69	12648.	34053.	78743.	8977.	81931.	4737.	274.	67.	282.	364073.
70-74	10612.	11914.	19679.	37066.	41357.	42524.	2909.	64.	0.	213613.
75-79	1992.	5428.	5632.	7597.	13464.	11310.	16604.	672.	60.	95777.
80-84	3683.	3384.	2735.	2574.	2249.	3872.	2614.	8010.	64.	42002.
85+	2169.	2033.	1108.	893.	618.	697.	741.	765.	2772.	15818.
TOTAL	2258798.	1906515.	1205093.	644110.	331592.	143455.	55724.	24103.	7430.	21330112.

TOTAL NUMBER OF MEMBERS
ALL HOUSEHOLDS COMBINED
FEMALE MEMBERS

AGE GROUP	0-4	5-9	10-14	15-19	- AGE OF WIFE OR HEAD -		20-24	25-29	30-34	35-39	40-44
0-4	0.	0.	0.	4757.	249948.	996807.	593406.	90871.	4580.		
5-9	0.	0.	0.	153.	12625.	296245.	994399.	522917.	144127.		
10-14	0.	0.	0.	4481.	6041.	18522.	297143.	761742.	443936.		
15-19	0.	0.	0.	111792.	12288.	90601.	70144.	237702.	528253.		
20-24	0.	0.	0.	4079.	836922.	78927.	51338.	31012.	102510.		
25-29	0.	0.	0.	167.	2655.	1708242.	9041.	5394.	4333.		
30-34	0.	0.	0.	531.	5755.	19215.	1729880.	24060.	14909.		
35-39	0.	0.	0.	516.	2321.	4615.	8040.	1352749.	6343.		
40-44	0.	0.	0.	0.	0.	3.	3.	0.	1168882.		
45-49	0.	0.	0.	0.	1.	0.	0.	0.	0.		
50-54	0.	0.	0.	2239.	32458.	62478.	20185.	1172.	323.		
55-59	0.	0.	0.	2045.	30854.	87791.	68310.	21889.	1574.		
60-64	0.	0.	0.	1813.	21050.	72285.	85775.	61953.	27242.		
65-69	0.	0.	0.	1454.	13143.	48767.	68341.	72071.	62100.		
70-74	0.	0.	0.	123.	5263.	20223.	47486.	51831.	59994.		
75-79	0.	0.	0.	98.	1637.	9213.	17751.	21828.	31645.		
80-84	0.	0.	0.	49.	1423.	4203.	6702.	9367.	15232.		
85+	0.	0.	0.	43.	854.	3156.	4366.	2849.	4893.		
TOTAL	0.	0.	0.	154381.	1295237.	3521084.	4072325.	3269403.	2620934.		

AGE GROUP	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	TOTAL
0-4	17295.	52762.	49431.	31831.	16244.	5633.	1634.	790.	120.	2115903.
5-9	5921.	15962.	29688.	26137.	15675.	7322.	1566.	645.	38.	2073413.
10-14	186100.	72484.	33428.	27614.	18329.	8770.	2816.	1031.	164.	1882596.
15-19	480499.	246130.	108450.	30785.	11226.	5620.	3395.	2000.	336.	2019218.
20-24	333874.	348236.	166547.	69681.	19318.	5504.	3302.	1456.	423.	2053118.
25-29	35543.	141900.	109337.	58030.	25659.	7267.	2456.	1146.	621.	211831.
30-34	13426.	31454.	50736.	36545.	21334.	9792.	2104.	1044.	72.	1960855.
35-39	5926.	4213.	13005.	21330.	17369.	8764.	3652.	932.	257.	1450031.
40-44	11.	4.	41.	414.	837.	583.	783.	67.	26.	1171156.
45-49	1074213.	4.	1.	5.	33.	54.	33.	13.	6.	1074362.
50-54	217.	894487.	53.	239.	824.	2731.	4689.	2450.	601.	1025146.
55-59	149.	229.	630128.	150.	65.	226.	2410.	1866.	1055.	848721.
60-64	3012.	1003.	1079.	383358.	224.	314.	270.	628.	201.	660207.
65-69	28566.	3995.	738.	711.	224879.	199.	65.	279.	68.	525376.
70-74	47579.	20070.	2507.	859.	128.	105574.	118.	58.	121.	361936.
75-79	42021.	32133.	12398.	1734.	151.	397.	41813.	169.	0.	212988.
80-84	20024.	24196.	15242.	5782.	1164.	272.	817.	14637.	0.	119111.
85+	7366.	9986.	9648.	4311.	2841.	648.	69.	249.	5730.	57010.
TOTAL	2301741.	1899242.	123245.	699515.	376300.	169673.	71496.	29460.	9838.	21722928.

APPENDIX A.

Appendix A. Headship rates, by household type and age of head: Six

Household type and country (year)	15-19	20-24	25-29	30-34	35-39	40-44
Combined, males						
Indonesia (1976)	0.023	0.253	0.608	0.834	0.930	0.954
Republic of Korea (1970)	0.027	0.090	0.471	0.832	0.905	0.946
Republic of Korea (1980)	0.032	0.102	0.510	0.844	0.923	0.953
Malaysia (1980)	0.030	0.185	0.466	0.706	0.794	0.889
Philippines (1975)	0.020	0.229	0.573	0.783	0.875	0.915
Taiwan (1980)	0.016	0.083	0.593	0.858	0.938	0.956
Thailand (1970)	0.016	0.204	0.549	0.754	0.846	0.913
Thailand (1980)	0.019	0.201	0.529	0.740	0.844	0.902
Combined, females						
Indonesia (1976)	0.005	0.013	0.027	0.057	0.095	0.152
Republic of Korea (1970)	0.008	0.021	0.027	0.046	0.085	0.127
Republic of Korea (1980)	0.027	0.063	0.048	0.063	0.092	0.124
Malaysia (1980)	0.014	0.046	0.051	0.072	0.099	0.129
Philippines (1975)	0.001	0.004	0.012	0.025	0.042	0.066
Taiwan (1980)	0.011	0.035	0.026	0.030	0.040	0.039
Thailand (1970)	0.004	0.016	0.029	0.044	0.071	0.111
Thailand (1980)	0.006	0.021	0.034	0.051	0.080	0.108
Intact						
Indonesia (1976)	0.013	0.225	0.579	0.809	0.904	0.926
Republic of Korea (1970)	0.002	0.035	0.403	0.811	0.891	0.924
Republic of Korea (1980)	0.001	0.042	0.431	0.813	0.900	0.925
Malaysia (1980)	0.003	0.078	0.363	0.642	0.739	0.832
Philippines (1975)	0.014	0.209	0.543	0.750	0.835	0.862
Taiwan (1980)	0.001	0.034	0.485	0.805	0.898	0.906
Thailand (1970)	0.009	0.176	0.517	0.724	0.814	0.874
Thailand (1980)	0.011	0.176	0.493	0.707	0.809	0.861
Single-headed, male						
Indonesia (1976)	0.007	0.019	0.019	0.017	0.019	0.022
Republic of Korea (1970)	0.025	0.055	0.067	0.021	0.012	0.021
Republic of Korea (1980)	0.013	0.036	0.050	0.021	0.015	0.021
Malaysia (1980)	0.011	0.053	0.050	0.036	0.027	0.034
Philippines (1975)	0.003	0.013	0.021	0.024	0.031	0.043
Taiwan (1980)	0.014	0.043	0.094	0.047	0.031	0.043
Thailand (1970)	0.003	0.013	0.017	0.018	0.022	0.027
Thailand (1980)	0.003	0.014	0.018	0.019	0.021	0.027
Single-headed, female						
Indonesia (1976)	0.002	0.009	0.022	0.051	0.085	0.134
Republic of Korea (1970)	0.007	0.020	0.026	0.045	0.083	0.125
Republic of Korea (1980)	0.010	0.031	0.031	0.050	0.081	0.112
Malaysia (1980)	0.008	0.029	0.038	0.064	0.091	0.120
Philippines (1975)	0.000	0.004	0.011	0.024	0.040	0.064
Taiwan (1980)	0.011	0.032	0.023	0.026	0.038	0.036
Thailand (1970)	0.003	0.011	0.024	0.040	0.065	0.105
Thailand (1980)	0.004	0.014	0.025	0.043	0.072	0.100

Asian countries, 1970-80

Age								
45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85 +
0.963	0.964	0.946	0.909	0.891	0.841	0.794	0.725	0.626
0.964	0.966	0.950	0.873	0.775	0.604	0.503	0.358	0.307
0.963	0.970	0.958	0.920	0.829	0.704	0.563	0.459	0.385
0.861	0.926	0.881	0.884	0.806	0.801	0.678	0.589	0.504
0.934	0.938	0.931	0.908	0.870	0.796	0.730	0.655	0.525
0.951	0.902	0.803	0.601	0.468	0.334	0.285	0.160	0.159
0.939	0.945	0.940	0.894	0.853	0.769	0.659	0.545	0.465
0.935	0.948	0.950	0.912	0.876	0.790	0.702	0.598	0.524
0.199	0.243	0.288	0.322	0.321	0.333	0.337	0.319	0.220
0.149	0.147	0.121	0.102	0.080	0.053	0.034	0.034	0.023
0.169	0.211	0.228	0.211	0.188	0.155	0.126	0.092	0.078
0.178	0.229	0.270	0.307	0.299	0.306	0.257	0.265	0.239
0.094	0.129	0.154	0.187	0.201	0.222	0.232	0.213	0.166
0.038	0.032	0.042	0.030	0.035	0.037	0.041	0.000	0.000
0.167	0.223	0.267	0.289	0.296	0.304	0.288	0.237	0.185
0.152	0.210	0.260	0.301	0.340	0.330	0.317	0.305	0.254
0.927	0.922	0.900	0.850	0.792	0.738	0.695	0.604	0.485
0.932	0.925	0.896	0.805	0.695	0.523	0.408	0.239	0.216
0.926	0.924	0.904	0.853	0.750	0.608	0.459	0.315	0.220
0.790	0.836	0.774	0.755	0.664	0.633	0.511	0.424	0.389
0.867	0.855	0.832	0.786	0.742	0.657	0.577	0.475	0.373
0.880	0.806	0.681	0.500	0.368	0.256	0.216	0.160	0.053
0.887	0.874	0.847	0.784	0.721	0.601	0.490	0.323	0.301
0.878	0.877	0.850	0.784	0.738	0.621	0.510	0.424	0.363
0.031	0.034	0.035	0.045	0.068	0.073	0.071	0.077	0.129
0.031	0.039	0.052	0.067	0.077	0.079	0.094	0.119	0.080
0.027	0.034	0.043	0.052	0.065	0.080	0.081	0.126	0.144
0.041	0.057	0.063	0.078	0.088	0.104	0.100	0.100	0.054
0.056	0.069	0.079	0.096	0.095	0.099	0.112	0.123	0.116
0.050	0.049	0.052	0.054	0.055	0.039	0.006	0.000	0.000
0.039	0.057	0.077	0.092	0.107	0.137	0.137	0.185	0.134
0.042	0.056	0.080	0.102	0.109	0.140	0.161	0.136	0.116
0.166	0.183	0.207	0.211	0.190	0.184	0.145	0.136	0.088
0.148	0.146	0.126	0.111	0.080	0.055	0.034	0.032	0.023
0.152	0.180	0.177	0.139	0.109	0.082	0.062	0.046	0.027
0.163	0.206	0.227	0.237	0.203	0.193	0.146	0.122	0.109
0.091	0.120	0.139	0.159	0.161	0.169	0.170	0.151	0.116
0.034	0.025	0.025	0.017	0.005	0.010	0.023	0.000	0.000
0.157	0.209	0.240	0.250	0.248	0.248	0.218	0.170	0.113
0.142	0.193	0.234	0.268	0.283	0.263	0.254	0.233	0.199

Appendix A. (continued)

Household type and country (year)	15-19	20-24	25-29	30-34	35-39	40-44
One-person, male						
Indonesia (1976)	0.002	0.006	0.008	0.008	0.007	0.006
Republic of Korea (1970)	0.000	0.001	0.001	0.001	0.001	0.001
Republic of Korea (1980)	0.009	0.016	0.023	0.009	0.006	0.006
Malaysia (1980)	0.016	0.054	0.053	0.027	0.027	0.024
Philippines (1975)	0.002	0.005	0.007	0.007	0.008	0.009
Taiwan (1980)	0.006	0.005	0.014	0.007	0.009	0.007
Thailand (1970)	0.003	0.011	0.012	0.010	0.008	0.011
Thailand (1980)	0.003	0.011	0.012	0.011	0.011	0.011
One-person, female						
Indonesia (1976)	0.002	0.003	0.004	0.006	0.010	0.018
Republic of Korea (1970)	0.001	0.001	0.001	0.002	0.002	0.002
Republic of Korea (1980)	0.008	0.022	0.014	0.011	0.010	0.011
Malaysia (1980)	0.006	0.017	0.015	0.008	0.009	0.009
Philippines (1975)	0.000	0.000	0.001	0.001	0.001	0.002
Taiwan (1980)	0.000	0.003	0.003	0.004	0.002	0.003
Thailand (1970)	0.001	0.003	0.004	0.003	0.005	0.005
Thailand (1980)	0.002	0.005	0.006	0.007	0.007	0.007
Primary-individual, male						
Indonesia (1976)	0.001	0.002	0.001	0.001	0.000	0.000
Republic of Korea (1970)	0.000	0.000	0.000	0.000	0.000	0.000
Republic of Korea (1980)	0.010	0.008	0.006	0.001	0.001	0.001
Malaysia (1980)	-	-	-	-	-	-
Philippines (1975)	0.001	0.003	0.003	0.002	0.002	0.001
Taiwan (1980)	0.000	0.000	0.000	0.000	0.000	0.000
Thailand (1970)	0.001	0.003	0.003	0.002	0.002	0.002
Thailand (1980)	0.001	0.005	0.006	0.003	0.003	0.002
Primary-individual, female						
Indonesia (1976)	0.000	0.000	0.000	0.000	0.000	0.001
Republic of Korea (1970)	0.000	0.000	0.000	0.000	0.000	0.000
Republic of Korea (1980)	0.010	0.011	0.004	0.002	0.002	0.001
Malaysia (1980)	-	-	-	-	-	-
Philippines (1975)	0.000	0.000	0.000	0.000	0.000	0.000
Taiwan (1980)	0.000	0.000	0.000	0.000	0.000	0.000
Thailand (1970)	0.000	0.001	0.001	0.001	0.001	0.001
Thailand (1980)	0.001	0.003	0.004	0.001	0.002	0.001

Note: Primary individual households were not tabulated in the Malaysia census.

Age								
45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
0.004	0.009	0.012	0.013	0.032	0.029	0.028	0.043	0.012
0.002	0.001	0.002	0.001	0.003	0.002	0.002	0.000	0.011
0.008	0.011	0.010	0.014	0.013	0.015	0.023	0.017	0.021
0.031	0.033	0.044	0.051	0.054	0.064	0.068	0.065	0.060
0.010	0.013	0.018	0.024	0.031	0.036	0.036	0.052	0.032
0.021	0.047	0.073	0.048	0.066	0.036	0.063	0.000	0.105
0.012	0.013	0.015	0.017	0.024	0.030	0.032	0.036	0.029
0.012	0.013	0.017	0.025	0.028	0.026	0.031	0.031	0.045
0.033	0.059	0.080	0.108	0.130	0.148	0.192	0.183	0.130
0.001	0.001	0.001	0.001	0.000	0.001	0.001	0.002	0.000
0.016	0.030	0.048	0.069	0.076	0.070	0.063	0.044	0.049
0.015	0.023	0.043	0.070	0.096	0.113	0.112	0.143	0.130
0.003	0.008	0.014	0.025	0.037	0.049	0.054	0.059	0.047
0.004	0.007	0.016	0.014	0.030	0.027	0.018	0.000	0.000
0.009	0.013	0.026	0.038	0.047	0.053	0.066	0.067	0.072
0.010	0.016	0.024	0.031	0.035	0.063	0.061	0.070	0.055
0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000
0.001	0.002	0.002	0.002	0.002	0.003	0.004	0.004	0.004
0.000	0.000	0.000	0.001	0.000	0.003	0.000	0.000	0.000
0.001	0.001	0.001	0.001	0.001	0.002	0.000	0.001	0.001
0.002	0.001	0.002	0.001	0.001	0.003	0.000	0.007	0.000
0.000	0.001	0.001	0.002	0.002	0.001	0.001	0.001	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.001	0.002	0.003	0.003	0.003	0.002	0.001	0.001	0.002
0.000	0.001	0.002	0.002	0.003	0.004	0.008	0.003	0.002
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.001	0.001	0.001	0.002	0.001	0.003	0.003	0.001	0.001
0.001	0.001	0.002	0.001	0.004	0.004	0.002	0.001	0.000

APPENDIX B. SUMMARIES OF HOMES PROGRAMS

Program: HOMES.CNTL

Objective: Project the number and demographic characteristics of households.

Input: User provided
country.POP.DATA
country.FERT.DATA
Stage 1 output
country.R1.DATA
country.R2.DATA
country.R3.DATA
country.R4.DATA
country.R5.DATA
country.K.DATA
country.IGW.DATA
country.CIV.DATA
Source program
HHPART2B.FORT

Output: country.N1.DATA
country.N2.DATA
country.NT.DATA

Execution: 1. Edit/create country.POP.DATA, country.FERT.DATA, and country.CIV.DATA. (For specifications, see section 4.)
2. Edit HOMES.CNTL to specify proper input and output files.
3. Submit HOMES.CNTL

Programs:	DSET1.CNTL DSET2.CNTL DSETE.CNTL
Objective:	Uses output from HOMES projections to create SAS partitioned data sets used for secondary analysis, such as generating summary tables and graphs.
Input:	country.N1.DAT country.N2.DAT country.N1.DAT
Output:	country.N1.SAS(year) country.N2.SAS(year) country.N1.SAS(year) year = 1st projection year, . . . , last projection year
Execution:	1. Edit DSET1.CNTL to specify proper input and output files. 2. Specify the first and last projection years in the statements "%LET START = startyr;" and "%LET END = endyr;" 3. Submit the program.

Program: REPORT1.CNTL

Objective: Produces summary tables of household projections for selected years. User allowed to select among nine summary tables.

Input: country.N1.SAS(Yyear)
country.N2.SAS(Yyear)
country.NT.SAS(Yyear)

Input files are generated by DSFT1.CNTL.

Output: Table 1. Number of heads and spouses
Table 2. Number of children
Table 3. Number of parents
Table 4. Number of grandchildren
Table 5. Number of others
Table 6. Total number of members
Table 7. Age of members by type of household
Table 8. Age of members by age of head
Table 9. Relationship to head by age of head

Execution: 1. Create SAS data sets using DSFT1.CNTL.
2. Edit REPORT1.CNTL, change input and output file names.
3. Specify the name of country and the year of the report in "%LET COUNTRY = country" and "%LET YEAR = year".
4. Select the tables to be printed (see table numbers above) in the statement "%LET TABLENO = %STR(.....)".
5. Specify the number of tables selected in the statement "%LET TABCNT =".
6. Submit the program.

Comment: Summary tables presented in section 1 for the Republic of Korea were generated using these procedures.

-
- Program: REPORT2.CNTL
- Objective: Produces detailed summary tables of household projections for selected years. User allowed to select among six summary tables.
- Input: country.N1.SAS(Yyear)
country.N2.SAS(Yyear)
country.NT.SAS(Yyear)
- Input files are generated by DSETi.CNTL.
- Output: Table 1. Number of heads and spouses
Table 2. Number of children
Table 3. Number of parents
Table 4. Number of grandchildren
Table 5. Number of others
Table 6. Total number of members
- Execution: 1. Create SAS data sets using DSETi.CNTL.
2. Edit REPORT2.CNTL, change input and output file names.
3. Specify the name of country and the year of the report in "%LET COUNTRY = country" and "%LET YEAR = year".
4. Select the tables to be printed (see table numbers above) in the statement "%LET TABLENO = %STR(. . .);".
5. Specify the number of tables selected in the statement "%LET TABCNT = . . . ;".
6. Submit the program.
- Comment: This program generates tables with more age detail than in REPORT1.CNTL.

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